



- Final -

ENVIRONMENTAL ASSESSMENT
FOR THE
CONSTRUCTION AND OPERATION
OF THE
CONSOLIDATED LOGISTICS AND TRAINING FACILITY
AT THE
LAKEHURST NAVAL AIR ENGINEERING STATION
Jackson Township, Ocean County, New Jersey

Prepared for:

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ENVIRONMENTAL ASSESSMENT SIGNATURE PAGE

LEAD AGENCY: New Jersey Army National Guard

COOPERATING AGENCIES: National Guard Bureau,
Lakehurst Naval Air Engineering Station

TITLE OF PROPOSED ACTION: Construction and Operation of the Consolidated Logistics
and Training Facility at the Lakehurst Naval Air
Engineering Station

AFFECTED JURISDICTION: New Jersey

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ABSTRACT: The New Jersey Army National Guard proposes to construct a Consolidated Logistics and Training Facility at the Lakehurst Naval Air Engineering Station, Jackson Township, New Jersey. This Environmental Assessment addresses the potential environmental, socioeconomic, and cultural impacts of this proposal at the Lakehurst Naval Air Engineering Station. The Proposed Action is necessary to provide a multi-functional logistics and training support facility to help ensure the military readiness of the New Jersey Army National Guard.

This Environmental Assessment considers alternative actions for implementing the Proposed Action. One of the five evaluated alternatives was considered feasible based on the two-stage screening process conducted by New Jersey Army National Guard and United States Army Reserve staff. The No-Action Alternative was also retained for evaluation in this Environmental Assessment.



This Environmental Assessment evaluates the individual and cumulative effects of the Preferred Alternative (Alternative 3) and the No-Action Alternative (Alternative 5) with respect to a variety of criteria, including physical environment; water quality; groundwater; air quality; biological resources, such as vegetation, wildlife, wildlife habitat, plant communities, protected species, and wetlands; land use; socioeconomic environment; noise; hazardous, and toxic wastes; cultural resources; infrastructure; and human health and safety, including environmental justice and children's health and safety risks.

The evaluation performed within this Environmental Assessment concludes that no significant adverse impact to any federally listed threatened or endangered species would be anticipated. However, adverse impact to approximately 110 acres of foraging habitat of the northern pine snake, a state-listed endangered species, would be anticipated. This impact would equal approximately 0.5 percent of what is considered the "local population" area of northern pine snake. According to the New Jersey Pinelands Commission, the Proposed Action would not have an irreversible adverse impact to the local population of northern pine snake; therefore, resulting in minor, adverse impacts to biological resources. A negative cumulative impact to potential habitat of the northern pine snake would not be anticipated due to implementation of Alternative 3. Implementation of management controls and measures would serve to further reduce negative impacts to this special status species.

The proposed tank trail associated with Alternative 3 would cross over Ocean County Route 539, between the proposed Consolidated Logistics and Training Facility site and military ranges at Fort Dix, for travel by various military tactical and non-tactical vehicles. The location of the proposed tank trail would allow an approximate 0.25-mile visibility in either direction of Ocean County Route 539. The proposed tank trail would require implementation of safety measures (e.g., railroad-type crossing) to minimize impacts to Ocean County Route 539 motorists. Implementation of safety measures would reduce public safety impacts to less-than-significant levels.

This analysis determines that an Environmental Impact Statement is not necessary for implementation of Alternative 3 and that a Finding of No Significant Impact is appropriate. Positive impacts to the local socioeconomic environment and on-site environmental justice would be anticipated.

This Environmental Assessment recommends that the New Jersey Army National Guard elect to implement Alternative 3. Implementation of Alternative 3 would serve to fulfill the purpose of and need for the Proposed Action while minimizing overall potential for negative impacts.



ENVIRONMENTAL ASSESSMENT ORGANIZATION

This Environmental Assessment evaluates the potential environmental, socioeconomic, and cultural effects associated with the construction and operation of a Consolidated Logistics and Training Facility at the Lakehurst Naval Air Engineering Station, located in Jackson Township, Ocean County, New Jersey, in order to offer state-of-the-art training and logistical support to New Jersey Army National Guard units within reasonable driving distance to the Fort Dix United States Army Reserve training ranges and facilities.

As required by the National Environmental Policy Act of 1969 (42 USC 4321 *et seq.*), the Council on Environmental Quality Regulations Implementing the Procedural Provisions of the National Environmental Policy Act (40 Code of Federal Regulations 1500-1508), and 32 Council on Environmental Quality 651, the potential effects of the Proposed Action are analyzed. This Environmental Assessment will facilitate the decision process regarding the Proposed Action and its alternatives, and is organized in the following fashion:

EXECUTIVE SUMMARY briefly describes the Proposed Action; provides a summary of environmental, cultural, and socioeconomic consequences; and compares and contrasts potential effects associated with the two considered alternatives.

SECTION 1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION summarizes the purpose of and need for the Proposed Action, provides relevant background information, and describes the scope of the Environmental Assessment.

SECTION 2.0 DESCRIPTION OF THE PROPOSED ACTION describes the Proposed Action.

SECTION 3.0 ALTERNATIVES CONSIDERED examines alternatives for implementing the Proposed Action.

SECTION 4.0 AFFECTED ENVIRONMENT describes the existing environmental, cultural, and socioeconomic setting of the Lakehurst Naval Air Engineering Station.

SECTION 5.0 ENVIRONMENTAL CONSEQUENCES identifies potential environmental, cultural, and socioeconomic effects of implementing the Proposed Action and the No Action Alternative, and also identifies proposed management/mitigation measures.

SECTION 6.0 COMPARISON OF ALTERNATIVES AND CONCLUSIONS compares and contrasts environmental effects of the alternatives, and summarizes the significance of individual and expected cumulative effects for each alternative.

SECTION 7.0 REFERENCES provides bibliographical information for cited sources.

SECTION 8.0 GLOSSARY provides definitions for terms used in the Environmental Assessment.

SECTION 9.0 LIST OF PREPARERS identifies people who prepared the document and their areas of expertise.

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LIST OF ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit	CSMS	Combined Support Maintenance Shop
µg/L	micrograms per Liter	CWA	Clean Water Act of 1977
AASF	Army Aviation Support Facility	DA PAM	Department of the Army Pamphlet
ACHP	Advisory Council on Historic Preservation	dBA	A-weighted in Decibels
AFB	Air Force Base	DocB	Downer Loamy Sand, 0-5 percent slopes
AFI	Air Force Instruction	DOCKET	Civil Enforcement Docket
AHPA	Archeological and Historic Data Preservation Act	DoD	Department of Defense
AIRFA	American Indian Religious Freedom Act	E&S	Erosion and Sedimentation
AMEC	AMEC Earth & Environmental, Inc.	EA	Environmental Assessment
amsl	above mean sea level	EBS	Environmental Baseline Survey
API	Aircraft Platform Interface	EcoSearch	EcoSearch Environmental Records, Inc.
AR	Army Regulation	EIS	Environmental Impact Statement
ARH	Adams, Rehmann & Heggan Associates, Inc.	EO	Executive Order
ARNG	Army National Guard	EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
Ats	Atsion Sand	ERNS	Emergency Response Notification System
ARPA	Archeological Resources Protection Act	ESA	Endangered Species Act of 1973
BMPs	Best Management Practices	EveB	Evesboro Sand, 0-5 percent slopes
BOMARC	Boeing Michigan Aeronautical Research Center	FEMA	Federal Emergency Management Agency
CAA	Clean Air Act	FONSI	Finding of No Significant Impact
CAAA	Clean Air Act Amendments of 1990	ft ²	square foot/square feet
CEQ	Council on Environmental Quality	FWPCA	Federal Water Pollution Control Act of 1972
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	GIS	Geographic Information System
CERCLA-NFRAP	Comprehensive Environmental Response, Compensation, and Liability Act-No Further Remedial Action Planned	gpd	gallons per day
CFR	Code of Federal Regulations	gpm	gallons per minute
CLTF	Consolidated Logistics Training Facility	HAP	Hazardous Air Pollution
CO	carbon monoxide	HEMTT	Heavy Expanded Mobility Tactical Truck
CORRACTS	Corrective Action Report	ICRMP	Integrated Cultural Resources Management Plan



IICEP	Interagency and Intergovernmental Coordination for Environmental Planning	NJDMAVA	New Jersey Department of Military and Veterans Affairs
LasB	Lakewood Sand, 3-5 percent slope	NJDOT	New Jersey Department of Transportation
LasC	Lakewood Sand, 5-10 percent slopes	NJPDES	New Jersey Pollutant Discharge Elimination System
LakB	Lakehurst Sand, 0-3 percent slope	NO ₂	Nitrogen Dioxide
L _{dn}	Day-Night Level	NOA	Notice of Availability
LUST	Leaking Underground Storage Tank	NO _x	Nitrogen Oxides
LUSTC	Regulated UST Contamination Case List	NPDES	National Pollutant Discharge Elimination System
LUSTIN	Release Data from the Incident Notification Database	NPL	National Priorities List
MACT	Maximum Achievable Control Technology	NRCS	Natural Resources Conservation Service
Makt	Manahawkin Muck	NRHP	National Register of Historic Places
MATES	Military and Training Equipment Site	NWI	National Wetland Inventory
MCL	Maximum Concentration Level	O ₃	Ozone
mg/y	million gallons per year	OMS	Organizational Maintenance Shop
MI	Military Installation (Zone)	ORA	Orth-Rodgers & Associates, Inc.
mph	miles per hour	P.L.	Public Law
MW	Monitoring Well	PADS	PCB Activity Database System
N.J.A.C.	New Jersey Administrative Code	Pb	lead
N.J.S.A.	New Jersey Statutes Annotated	pCi/L	picoCuries per Liter
NAAQS	National Ambient Air Quality Standards	PHG	Pits, Sand, and Gravel
NAES	Naval Air Engineering Station	PM	Particulate Matter
NAGPRA	Native American Graves and Repatriation Act	PM ₁₀	Particulate Matter less than or equal to 10 micrometers
NAWCADLKE	Naval Air Warfare Center Aircraft Division Lakehurst	PM _{2.5}	Particulate Matter less than or equal to 2.5 micrometers
NEPA	National Environmental Policy Act of 1969	PNDI	Pennsylvania National Diversity Inventory
NGB	National Guard Bureau	POL	Petroleum, Oil, or Lubricants
NGTC	National Guard Training Center	POV	Privately Owned Vehicle
NHPA	National Historic Preservation Act	PPA	Pollution Prevention Act of 1990
NJARNG	New Jersey Army National Guard	ppm	parts per million
NJDEP	New Jersey Department of Environmental Protection	PQL	Practical Quantitation Limit
		PWS	Public Water Supply Wells
		RCRA	Resource Conservation and Recovery Act
		RCRA Generator	Resource Conservation and Recovery Information System-Large and Small Quality Generators



RCRA-TSD	Resource Conservation and Recovery Information System – Treatment, Storage, and Disposal Facilities	UR	Urban Land
		U.S.	United States
		USACE	United States Army Corps of Engineers
RI/FS	Remedial Investigation and Feasibility Study	USACHPPM	United States Army Center for Health Promotions and Preventative Medicine
RONA	Record of Non-Applicability		
RSTS	Recovery System Test Sites	USAR	United States Army Reserve
SARA	Superfund Amendments and Reauthorization Act of 1986	USC	United States Code
		USDA	United States Department of Agriculture
SATCOM	Satellite Communication		
SDWA	Safe Drinking Water Act of 1974	USEPA	United States Environmental Protection Agency
SHPO	State Historic Preservation Officer	USFWS	United States Fish and Wildlife Service
SHWS (KCSL)	State Hazardous Waste Sites Known Contaminated Sites List	UST	Underground Storage Tank
SO ₂	Sulfur Dioxide	UTES	Unit Training Equipment Site
SOP	Standard Operating Procedure	VOC	Volatile Organic Compound
SO _x	Sulfur Oxides	WEC	Wander Ecological Consultants
SPCC	Spill Prevention, Control, and Countermeasures	WRDA	Water Resources Development Act of 1990
SPILLS	Spills Data fro the Incident Notification Database	WSRA	Wild and Scenic Rivers Act of 1968
SSTS	Section Seven Tracking System	YACC	Young Adult Conservation Corps
STOW	Synthetic Theatre of War		
SWF	Solid Waste Facilities	Zone I	L _{dn} below 65 dBA
TCE	Trichloroethylene	Zone II	Between 65-75 dBA
TCP	Traditional Cultural Property	Zone III	L _{dn} above 75 dBA
TNC	The Nature Conservancy		
TNM	Traffic Noise Model		
TRI	Toxic Release Inventory		
TSCA	Toxic Substances Control Act		



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EXECUTIVE SUMMARY

Environmental Assessment Construction and Operation of the Consolidated Logistics and Training Facility at the Lakehurst Naval Air Engineering Station

This Environmental Assessment (EA) has been prepared to identify, document, and discuss the possible environmental, cultural, and socioeconomic impacts associated with the construction and operation of a Consolidated Logistics and Training Facility (CLTF) at the Lakehurst Naval Air Engineering Station (NAES), located in Jackson Township, Ocean County, New Jersey, in order to provide a multi-functional logistics and training support facility that ensures military readiness of the New Jersey Army National Guard (NJARNG).

This EA provides the necessary information to properly and fully assess potential effects of proposed improvements at the Lakehurst NAES as required under the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321 *et seq.*); the President's Council of Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] 1500-1508); and 32 CFR 651.

Overview of Project Purpose and Need

The purpose of the Proposed Action is to consolidate NJARNG logistical support functions into an efficient, modern facility within reasonable driving distance to the Fort Dix United States Army Reserve (USAR) training ranges and facilities. In addition, the CLTF would become a state-of-the-art training facility for regional Army National Guard (ARNG) units, ensuring a high level of military readiness for NJARNG and units within reasonable driving distance to Fort Dix training ranges and facilities.

The facility would offer logistical support to soldiers training in the Fort Dix area. The facility would also be ideally suited for supporting institutional training, as well as field training and mobilization of the NJARNG and units located in surrounding states. The proposed new facility would have a modern infrastructure and would be constructed in close proximity to the NJARNG Training and Technology Battle Lab at Fort Dix, and to the State Headquarters for the New Jersey National Guard in Fort Dix, New Jersey. Implementation of the Proposed Action would create an enhanced training facility that would rely on a high technology interface to conduct training in the live, virtual, and constructive environments.

Summary Description of the Proposed Action

To achieve the purpose of and need for the Proposed Action, the NJARNG proposes to construct a CLTF at the Lakehurst NAES in Jackson Township, New Jersey. The proposal includes the following components at the Lakehurst NAES:

- Construct the CLTF using a phased approach:
 - Phase 1: Wheeled Vehicle Maintenance Shop - 109,000 square feet (ft²)
 - Phase 2: Tracked Vehicle Maintenance Shop - 84,000 ft²
 - Phase 3: Regional Training Facility - 90,000 ft²



Phase 4: Controlled Humidity Vehicle Storage Facility - 325,000 ft² and an Advanced Tank Bath Facility - 1,350 ft².

- An upgrade to approximately 4,000 feet of existing unpaved road (e.g., widening), as well as the construction of approximately 1,900 feet of new roadway between the proposed CLTF and the military training ranges at Fort Dix for travel by various military tactical and non-tactical vehicles
- Upgrading (e.g., widening, paving) the existing Lakehurst NAES South Boundary Road for access/egress to the developed eastern portion of the NAES
- Extending the existing natural gas line at Lakehurst NAES along South Boundary Road to the proposed CLTF site.

Overview of Considered Project Alternatives

This EA presents the five alternative actions considered for the Proposed Action:

- **Alternative 1:** Implementation of the Proposed Action at the Fort Dix USAR military reservation in New Jersey
- **Alternative 2:** Implementation of the Proposed Action at All Other New Jersey Department of Military and Veterans Affairs (NJDMAVA) Sites within New Jersey
- **Alternative 3:** Implementation of the Proposed Action at the Former Satellite Communications (SATCOM) Site at Lakehurst NAES – Preferred Alternative
- **Alternative 4:** Implementation of the Proposed Action at Other Locations Within Lakehurst NAES
- **Alternative 5:** No-Action Alternative.

The NJARNG and USAR staff conducted a two-stage screening process to identify all feasible alternatives for further evaluation. The two-stage screening process resulted in the elimination of three of the five potential alternatives from further consideration, leaving two feasible alternatives for comparative analysis in this EA:

- Alternative 3: Preferred Alternative – Construct the CLTF on a 140-acre site at the western perimeter of the Lakehurst NAES at the former Lakehurst SATCOM site.
- Alternative 5: No-Action Alternative – Do not construct the CLTF and continue to utilize the substandard logistical support and training facilities currently operated by the NJARNG.

All considered alternatives are located within the boundaries of the State of New Jersey, on lands that either the Federal or state government currently own or control. Alternatives located outside of these boundaries and parameters were not considered to be within the scope of this EA, as only lands under current ownership and control of either the Federal or state government can accommodate the rapid needs of this proposal.



Overview of Potential Project Impacts

Implementation of Alternative 3 would result in net beneficial impacts to the local socioeconomic environment at the Lakehurst NAES. Adverse impacts would be anticipated in the form of potential impacts to:

- Air quality due to increased mobile emissions and fugitive dust (minor, adverse impacts without management/mitigation)
- Noise environment due to increased vehicle operations (minor, adverse impacts without management/mitigation)
- Biological resources (sensitive species); loss of habitat for the northern pine snake due to land clearing (managed to less-than-significant levels through consultation with the New Jersey Pinelands Commission, the United States Fish and Wildlife Service [USFWS] and the New Jersey Department of Environmental Protection [NJDEP], Division of Fish, Game and Wildlife)
- Groundwater due to on-site disposal system, wash bays, and vehicle storage areas (minor, adverse impacts with management/mitigation)
- Geology, topography, and soils from soil erosion (minor, adverse impacts with management/mitigation)
- Local traffic due to tank trail crossing (minor, adverse impacts with management/mitigation).

Based on the analysis presented in this EA, Alternative 3 is the feasible build alternative for the Proposed Action.

Alternative 5, the No-Action Alternative, was not found to satisfy the purpose of or need for the Proposed Action. Alternative 5 would not consolidate NJARNG logistical support functions into an efficient, modern facility that meets current National Guard Bureau (NGB) space criteria and that is within close proximity to Fort Dix training ranges and facilities. However, Alternative 5 would have no impacts to regional air quality; local noise environment; on-site geology, topography, or soils; regional biological resources; surface hydrology and groundwater; or local traffic.

Overview of Potential Cumulative Impacts

Cumulative impacts to special status species, regional socioeconomics, and regional environmental quality may occur. Analyses that have been integrated into the cumulative impacts are discussed in **Section 5.14**. Overall, implementation of Alternative 3 would result in minor, adverse, cumulative impacts, provided that management/mitigation measures discussed in **Section 5.13** are implemented.

Conclusions

The evaluation performed within this EA concludes that no significant impact to any federally listed threatened or endangered species would be anticipated. However, adverse impacts to



approximately 110 acres of the foraging habitat of northern pine snake, a state-listed endangered species, would be anticipated. This impact equals approximately 0.5 percent of what is considered the “local population” of northern pine snake; therefore, the Proposed Action would not negatively impact the local population of the northern pine snake and would result in minor, adverse impacts to biological resources. Implementation of Alternative 3 would not result in a negative cumulative impact to potential habitat of the northern pine snake. Implementation of management measures serves to further reduce negative impacts to this special-status species.

The proposed tank trail associated with Alternative 3 would cross over Ocean County Route 539, between the proposed CLTF site and military ranges at Fort Dix, for travel by various military tactical and non-tactical vehicles. The location of the proposed tank trail would allow for an approximate 0.25-mile visibility in either direction on Ocean County Route 539. The proposed tank trail would require implementation of safety measures (e.g., railroad type crossing) to minimize impacts to Ocean County Route 539 motorists. Implementation of safety measures would reduce impacts to less-than-significant levels.

This analysis determines that an Environmental Impact Statement (EIS) is not necessary for the implementation of Alternative 3 and that a Finding of No Significant Impact (FONSI) is appropriate. Positive impacts to the local socioeconomic environment and on-site environmental justice would be anticipated.

This EA recommends that the NJARNG elect to implement Alternative 3. Implementation of Alternative 3 would serve to fulfill the purpose of and need for the Proposed Action, while minimizing the overall potential for negative impacts.



TABLE ES-1
Summary Descriptions of Impacts (with Management/Mitigation)
Associated with Alternatives 3 and 5 at the Project Study Area

Resource Area	Alternative 3	Alternative 5 No-Action Alternative
Land Use	○	○
Air Quality	■	○
Noise	■	○
Geology, Topography, and Soils	■	○
Water Resources	◐	○
Biological Resources	◐	○
Cultural Resources	○	○
Socioeconomics	■	○
Environmental Justice	■	○
Infrastructure	◐	○
Hazardous and Toxic Materials/Wastes	■	○

Key to Table ES-1 Symbols

Significant Adverse Impact	Minor Adverse Impact	No Impact	Minor Positive Impact	Significant Positive Impact
Long-Term Impact				
●	◐	○	◐	⦿
Short-Term Impact				
■	■	□	■	■



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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

The NJARNG proposes to construct and operate a CLTF at the Lakehurst NAES in Jackson Township, New Jersey. The CLTF provide a multi-functional logistics and training support facility to help ensure the military readiness of the NJARNG. The proposal includes:

- Acquire, via lease agreement, a 140-acre parcel of the Lakehurst NAES from the United States (U.S.) Navy
- Construct the CLTF using a phased approach:
 - Phase 1: Wheeled Vehicle Maintenance Shop - 109,000 ft²
 - Phase 2: Tracked Vehicle Maintenance Shop - 84,000 ft²
 - Phase 3: Regional Training Facility - 90,000 ft²
 - Phase 4: Controlled Humidity Vehicle Storage Facility - 325,000 ft² and an Advanced Tank Bath Facility - 1,350 ft².
- An upgrade to approximately 4,000 feet of an existing unpaved road (e.g., widening), and the construction of approximately 1,900 feet of new roadway between the proposed CLTF and the military training ranges at Fort Dix for travel by various military tactical and non-tactical vehicles
- Upgrading (e.g., widening, paving) the existing Lakehurst NAES South Boundary Road for access/egress to the developed eastern portion of the NAES
- Construction of a paved road for access/egress between Ocean County Route 539 and the proposed CLTF.

The proposed CLTF will offer state-of-the-art training and logistical support to NJARNG units in the Fort Dix area. Its proximity to Fort Dix is ideally suited to support institutional training, field training, and mobilization of NJARNG and units within reasonable driving distance to the Fort Dix training ranges and facilities.

Construction of the new CLTF will result in a centralized facility that will enhance and improve logistical and/or training readiness. The proposed new facility location will also consolidate the NJARNG's logistical support functions, allowing for the closure of several obsolete facilities. The CLTF will be developed in a series of four distinct phases, as capital funding becomes available, to meet NJARNG mission priorities. Each phase will complement the preceding development in order to provide a safe and efficient support and training facility. This approach will enable the NJARNG to fulfill its mission into the future in a cost-effective manner by using a technologically advanced, integrated facility.

1.1.1 Location and History of the Naval Air Engineering Station

The NAES is part of the 42,000-acre Joint Installation Partnership, which also includes the Fort Dix Military Reservation and McGuire Air Force Base (AFB). The NAES consists of approximately 7,430 acres and is located in Jackson and Manchester Townships, Ocean



County, New Jersey. It is located approximately 45 miles east of Philadelphia, Pennsylvania, 65 miles south of New York City, New York 50 miles south of Newark, New Jersey, and 10 miles west of the Atlantic Ocean (see **Figure 1-1**).

The NAES is bordered by the Fort Dix Military Reservation to the west, by the Collier Mills Wildlife and Game Refuge to the north, and by the Manchester Fish and Wildlife Area to the south. The remainder of the NAES property is bordered by privately owned lands consisting of special agricultural uses and vacant, forested lands.

The proposed 140-acre CLTF site is located on the western side of the NAES along Ocean County Route 539 (see **Figure 1-2**). It is bordered on the west by Ocean County Route 539 (also known as Hornerstown Road) and by Fort Dix Military Reservation. The remainder of the proposed CLTF site is surrounded by Lakehurst NAES property (see **Figure 1-3**).

Portions of the current NAES were first used in 1918 as a training camp, Camp Kendrick, for the Chemical Warfare Service. In 1919, the U.S. Navy purchased a total of 1,700 acres of land for use as a dirigible field, known as Naval Air Station, Lakehurst. The facility expanded throughout World War II as the use of airships increased. The Naval Air Station, Lakehurst was disestablished in March 1977 and became known as the NAES (ARH 2002).

Currently, the NAES is the Shore-Station Management component of the Naval Air Warfare Center Aircraft Division Lakehurst (NAWCADLKE). Lakehurst NAES provides and maintains facilities and centralized support services (e.g., facility support, security, fire department, safety, and supply) for the NAWCADLKE and tenant activities. Lakehurst NAES conducts programs in:

- Technology development
- Engineering
- Developmental evaluation and verification
- Systems integration
- Limited manufacturing
- Procurement
- Integrated logistics support management
- Fleet engineering support for military weapons systems, including Aircraft Platform Interface (API) systems. This includes:
 - Launching
 - Landing aids
 - Recovery
 - Handling
 - Propulsion support
 - Avionics support
 - Servicing and maintenance
 - Aircraft/weapons/ship compatibility.

Lakehurst NAES provides, operates, and maintains product evaluation and verification sites, aviation, and facilities and support services (including development of equipment and



instrumentation) for API systems and other U.S. Department of Defense (DoD) programs (Lakehurst NAES 2003).

The proposed 140-acre CLTF site once contained several barracks-like buildings that operated as SATCOM facilities during the 1950s. This program ended in 1962, and the structures remained vacant until the early 1970s when the Young Adult Conservation Corps (YACC) took over the existing structures for housing and operations until the YACC program ended in the mid-1980s. The buildings were once again abandoned and eventually used as storage space for installation avionics research groups and as meeting halls for the installation Rod and Gun Club. In 1995, all of the structures were dismantled and the former utility connections (primarily electricity and phone) were removed. Today, the Site is used sporadically to support base-wide hunting and forestry programs.

1.1.2 Environmental Assessment Framework

This EA has been prepared to document the potential for environmental impacts resulting from proposed NJARNG improvements at the NAES. This EA has also been prepared under the provisions of, and in accordance with, NEPA of 1969 (NEPA; 42 USC 4321 *et seq.*), CEQ Regulations Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), and 32 CFR 651 (Environmental Effects of Army Actions). In addition, the document has been prepared as prescribed in the *Army National Guard Manual for Compliance with the National Environmental Policy Act of 1969 - Guidance on Preparing Environmental Documentation for Army National Guard Actions in Compliance with NEPA* (ARNG NEPA Manual) (NGB 2002).

1.2 Purpose and Need

The primary purpose of the Proposed Action is to consolidate NJARNG logistical support functions into an efficient, modern facility that meets the current NGB space criteria, and that is located within close proximity to the Fort Dix training ranges and facilities. In addition, the CLTF will become a state-of-the-art training facility for regional ARNG units, ensuring a high level of military readiness for NJARNG and units within reasonable driving distance to Fort Dix training ranges and facilities. The Proposed Action is needed to provide elements of the NJARNG with adequate facilities to meet readiness, training, and retention objectives.

The facility would offer logistics support to soldiers training in the Fort Dix area. It would also be ideally suited to support institutional training, as well as field training and mobilization of the NJARNG and units located in surrounding states. The proposed new facility would have a modern infrastructure and would be located in close proximity to the NJARNG Training and Technology Battle Lab at Fort Dix, and to State Headquarters for the New Jersey National Guard. Implementation of the Proposed Action would create an enhanced training facility that would rely on a high technology interface to conduct training in Live, Virtual, and Constructive Environments, creating a true Synthetic Theater of War (STOW).

For this reason, it is critical for overall military readiness that the planned facility be of sufficient size to adequately accommodate both current and projected logistical support needs, while having access to the military training range facilities at Fort Dix for integrated troop and equipment training opportunities.



Construction of the facility would result in a centralized facility that would prevent deterioration of logistical and/or training readiness. It would also allow the NJARNG to continue to fulfill its mission into the future through a technologically advanced, integrated facility.

The development of the CLTF would allow for the closure of several statewide facilities that have become obsolete due to age, the inadequate size of work bays, and a lack of modern maintenance equipment. These facilities include the Combined Support Maintenance Shop (CSMS) in Bordentown and the Unit Training Equipment Site (UTES) on Fort Dix, as well as two Organizational Maintenance Shops (OMSs) located in both Sea Girt and Toms River. A part-time NJARNG presence at one or more of these facilities is anticipated at this time.

1.3 Scope of the Environmental Assessment

The scope of this EA includes the full breadth of potential environmental, cultural, and socioeconomic impacts to the environment and resources at Lakehurst NAES, Fort Dix Military Reservation, and the immediate vicinity that could result from construction and operation of the CLTF. Resource categories that are analyzed include physical environment; water quality; groundwater; air quality; biological resources, including vegetation, wildlife, wildlife habitat, plant communities, protected species, and wetlands; land use; socioeconomic environment; noise; hazardous, toxic, and radioactive substances and wastes; cultural resources; infrastructure; and human health and safety, including environmental justice and children's health and safety risks.

This EA provides a full comparative analysis of two feasible alternatives:

- Alternative 3: Preferred Alternative – Construct the CLTF on a 140-acre site at the western perimeter of the Lakehurst NAES at the former Lakehurst SATCOM site
- Alternative 5: No-Action Alternative – Do not construct the CLTF and continue to utilize the substandard logistical support and training facilities currently operated by the NJARNG.

A detailed description of Alternative 3, the Preferred Alternative, is provided in **Section 2.0**. **Section 3.0** presents screening criteria used for evaluation of the five considered alternatives. Application of screening criteria to each of the five alternatives is presented in **Sections 3.1** through **3.5**. Alternatives that were evaluated but eliminated from further consideration were:

- Alternative 1: Implementation of the Proposed Action at Fort Dix, New Jersey – This alternative considered construction of the CLTF at presently undeveloped and/or underutilized portions of Fort Dix
- Alternative 2: Implementation of the Proposed Action at Other NJDMAVA-Owned Sites Within New Jersey – This alternative considered construction of the CLTF at one of the approximate 40 NJDMAVA-owned or operated sites within the State of New Jersey
- Alternative 4: Implementation of the Proposed Action at Other Locations Within Lakehurst NAES – This alternative considered construction of the CLTF at other locations within the Lakehurst NAES.



All of the evaluated alternatives are located within the State of New Jersey, on lands that either the Federal or state government currently owns and controls. Alternatives located outside of these boundaries and parameters were not considered within the scope of this EA, as only those lands the Federal or state government currently owns and controls can accommodate the rapid-timeline needs of this proposal.

1.4 Agency and Public Involvement

As specified in NEPA and in NEPA's implementing regulations promulgated by the CEQ (40 CFR 1500-1508), 32 CFR 651, and the guidance provided in the ARNG NEPA Manual, public participation is a significant component of the NEPA process. The following key public notification and participation events occurred as part of this environmental review process:

- In conjunction with the Lakehurst NAES, and Fort Dix, the NJARNG conducted Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) pursuant to the requirements of NEPA as required under Executive Order (EO) 12372, which has since been superseded by EO 12416 and subsequently supplemented by EO 13132. The Draft EA provided a list of consulted agencies and individuals (AMEC 2005). It also included copies of IICEP letters submitted to respective agencies and individuals, as well as responses received (see **Appendix C**). Since the IICEP process was initiated in 1999, these agencies were also furnished with copies of the Draft EA when it was publicly circulated for review and comment in 2005.
- The NJARNG, as the proponent of the proposed project, published the Draft EA, distributed it for a 30-day public comment period, and announced its general circulation by a Notice of Availability (NOA) published in the *Asbury Park Press* and the *Trenton Times*, on 25 April 2005 and 26 April 2005, respectively (AMEC 2005). The NJDMAVA Public Affairs Officer was responsible for placing these notices and functioning as the primary contact for local news media inquiries. When the Draft EA was distributed to the public, copies and important reference documents were also made available for public review at the Ocean County Library near the Lakehurst NAES. The NJARNG was responsible for receiving comments resulting from the 30-day public comment period.
- If Native American remains or cultural objects are discovered at the proposed project site from normal operations or ground disturbing activities such as training operations, construction, and erosion by wind or water, the NJARNG would be required to contact Federally recognized Native American tribes with cultural affiliations to the proposed site per the Native American Graves Protection and Repatriation Act (NAGPRA), 25 USC §3001 et seq., and in accordance with the approved NJARNG Integrated Cultural Resources Management Plan (ICRMP) and the Lakehurst Cultural Resources Management Plan.
- The NJARNG received responses and/or comment letters from interested parties in association with public circulation of the Draft EA. Copies of received responses/comments on the Draft EA, as well as responses to these comments, are provided in this Final EA, as appropriate (see **Appendix E**).
- In order to document Final EA and FONSI availability, the NJARNG published an NOA of the Final EA and Draft FONSI in a manner similar to that described above, and



distributed the document to the public for a minimum 30-day review period. As the proponent, the NJARNG may not take any action, other than planning the proposal, until (1) the 30-day public review period on the Final EA has concluded, and (2) the draft FONSI has been made final and approved.



2.0 DESCRIPTION OF PROPOSED ACTION

The Proposed Action would involve construction of a CLTF to meet NJARNG needs and requirements. Improvements proposed at the Lakehurst NAES (the Preferred Alternative) are described below:

- Acquire, via lease agreement, a 140-acre parcel of the Lakehurst NAES (the former Lakehurst SATCOM site) from the U.S. Navy
- Construct the CLTF using a phased approach:
 - Phase 1: Wheeled Vehicle Maintenance Shop - 109,000 ft²
 - Phase 2: Tracked Vehicle Maintenance Shop - 84,000 ft²
 - Phase 3: Regional Training Facility - 90,000 ft²
 - Phase 4: Controlled Humidity Vehicle Storage Facility - 325,000 ft² and an Advanced Tank Bath Facility - 1,350 ft².
- Upgrade to approximately 4,000 feet of existing unpaved road (e.g., widening) and the construction of approximately 1,900 feet of new roadway between the proposed CLTF and the military training ranges at Fort Dix for travel by various military tactical and non-tactical vehicles
- Upgrade (e.g., widening, paving) the existing Lakehurst NAES South Boundary Road for access/egress to the developed eastern portion of the NAES
- Construct a paved road for access/egress between Ocean County Route 539 and the proposed CLTF.

Proposed physical improvements at the Lakehurst NAES are depicted in **Figures 2-1a** through **2-1c** and are described in detail below.

2.1 Phase 1: Wheeled Vehicle Maintenance Shop

The Proposed Action would involve construction of an approximate 109,000-ft² Wheeled Vehicle Maintenance Shop. The new facility would replace an existing CSMS (Bordentown CSMS) and would consolidate two existing OMSs, including Toms River (OMS 24) and Sea Girt (OMS 25), at one functionally integrated central location. The projected vehicular and staff utilization of the Wheeled Vehicle Maintenance Shop is presented in **Table 2-1**. A part time NJARNG presence at one or more of these older, existing facilities would be anticipated at this time.

2.2 Phase 2: Tracked Vehicle Maintenance Shop

An approximate 84,000-ft² Tracked Vehicle Maintenance Shop would be constructed to replace the outdated and undersized facility that the NJARNG is currently using at Fort Dix. The existing UTES facility would continue to be used for vehicle storage. The new facility would have the capability of maintaining tactical combat equipment for the current NJARNG force structure and meeting equipment maintenance requirements for future Army force structure (see **Table 2-2**). This phase of the Proposed Action would involve construction of a roadway to



provide a direct route from the CLTF site, across Ocean County Route 539, and into the Fort Dix Range Complex area (see **Section 2.5**).

2.3 Phase 3: Regional Training Facility

A 90,000-ft² Regional Training Facility is included as part of the Proposed Action. This multi-purpose training facility would integrate classroom and remote training experiences with actual field training on military training areas and firing ranges at Fort Dix. The proposed facility would also allow incoming units to park both military and Privately-Owned Vehicles (POVs) at the Site, attend on-site classroom and simulated training activities, and use available tactical vehicles on adjacent Fort Dix training areas. The proposed facility would allow maximum flexibility in the types of training available on-site and at the Fort Dix Military Reservation.

2.4 Phase 4: Controlled Humidity Storage Facility and Advanced Tank Bath

The Proposed Action would involve the construction of several Controlled Humidity Storage Buildings and a Tank Bath. The proposed facility would include a series of structures that provide approximately 325,000 ft² of interior storage. The protection of these structures would substantially lengthen the operating lifespan of military vehicles and equipment. Installation of a 1,350-ft² tank bath facility is also proposed as part of this phase (see **Table 2-4**).

2.5 Other Ancillary Facilities and Improvements

Additional features associated with the Proposed Action would include:

- Upgrade and construction of a tank trail between the proposed CLTF and Fort Dix Range Road:
 - Upgrade (e.g., widening and stabilization) of approximately 4,000 feet of existing unpaved road
 - Construction of approximately 1,900 feet of new roadway between the proposed CLTF and military training ranges at Fort Dix for travel by various military tactical and non-tactical vehicles, on lands that the U.S. Navy and the U.S. Army currently own and control
 - At a minimum, the tank trail would be widened to 24 feet and base stabilization would be received through the use of crushed stone and/or recycled concrete.
- Extension of the natural gas line along South Boundary Road to the proposed CLTF site.
 - Would extend approximately 3 miles southwest along South Boundary Road and approximately 0.5 miles northwest along an existing, unimproved road toward the proposed CLTF site
 - Proposed natural gas line is a 6-inch pipe placed approximately 42 inches underground, traveling both on and off the roadway.



2.6 Projected Vehicle Density Associated with the Proposed Action

NJARNG staff members have compiled projections on potential staff/vehicular utilization of the CLTF based on the phased approach described in **Sections 2.1** through **2.5**. These projections, which are reported in **Tables 2-1** through **Table 2-5** below, represent maximum anticipated vehicle densities with the Site functioning under full operating conditions. It is expected that this multi-functional site would operate below this level during most periods, such as those times when regional training exercises are not scheduled.

The maximum estimated total number of all on-site vehicles during any weekday for all four phases is $\pm 1,426$. The maximum estimated total number of all vehicles on site during any weekend for all four phases is $\pm 2,021$.

TABLE 2-1
Vehicular and Staff Utilization Projection
Phase 1: Wheeled Vehicle Maintenance Shop

	Weekdays	Additional Weekend Use
Employees and visitors	90 – 175	0 – 10
Vehicles on-site for repair (temporary storage)	50	0
Operational wheeled vehicles (permanent storage)	49	0
Track on-site vehicles (permanent storage)	20	0
POVs (transitional storage)	90 – 175	0 – 10

TABLE 2-2
Vehicular and Staff Utilization Projection
Phase 2: Tracked Vehicle Maintenance Shop

	Weekdays	Additional Weekend Use
Employees and visitors	50 – 95	10 – 150
Wheeled vehicles stored (permanent storage)	49	0
Trailers (permanent storage)	10	0
Tracked vehicles (permanent storage)	602	0
Fuel and M977 Heavy Expanded Mobility Tactical Trucks (HEMTTs) (permanent storage)	2	0
POVs (transitional storage)	50 – 95	10 – 150



TABLE 2-3
Vehicular and Staff Utilization Projection
Phase 3: Regional Training Facility

	Weekdays	Additional Weekend Use¹
Employees and visitors	40 – 75	75 – 250
Trucks (various) (permanent storage)	120	0
Buses (permanent storage)	10	0
POVs (transitional storage)	40 – 75	75 – 250

Note:

1. Military personnel will be transported via buses to the regional training facility; however, **Table 2-3** provides the worst-case scenario.

TABLE 2-4
Vehicular Utilization Projection
Phase 4: Controlled Humidity Storage Buildings and Tank Bath

	Weekdays	Additional Weekend Use
Tracked	125	0
Wheeled vehicles (permanent storage)	125	0

TABLE 2-5
Vehicular and Staff Utilization Projection
Total Personnel and Vehicle Density Estimate

	Weekdays	Additional Weekend Use
Employees and visitors	180 – 345	85 – 410
Equipment on-site for repair (temporary storage)	50	0
Wheeled vehicles stored (permanent storage)	223	0
Tracked vehicles (permanent storage)	747	0
Trailers (permanent storage)	10	0
Trucks (various) (permanent storage)	120	0
Buses (permanent storage)	10	0
Fuel trucks (permanent storage)	2	0
POVs (transitional storage)	180 – 345	85 – 410



3.0 ALTERNATIVES CONSIDERED

Per NEPA, CEQ regulations and 32 CFR 651, the NJARNG is required to rigorously explore and objectively evaluate all reasonable alternatives for CLTF construction. In addition, alternatives that are eliminated from detailed study must be identified with a brief discussion of the reasons for eliminating them.

The NJARNG and USAR staff at Fort Dix conducted a two-stage screening process to identify potential sites on which to locate the CLTF. This consisted of (1) a preliminary screening to identify possible CLTF site locations and (2) a more detailed second screening to select the NJARNG's preferred alternative.

The following presents preliminary screening criteria used to identify possible sites on which to locate the CLTF:

- A.** The CLTF must be located in relative close proximity to the established military training areas and firing ranges at Fort Dix
- B.** Siting of the CLTF must consider proximity to current and projected USAR facilities and operations at Fort Dix as well as tenant facilities and operations. Specifically, the CLTF must not interfere with:
 - 1. Specialized or standard military training and bivouac areas of the buffer zones for these areas
 - 2. Small arms, mortar, artillery, and aviation firing ranges or the buffers for these areas
 - 3. Tactical vehicle ranges/trails and the buffer zones for these areas
- C.** The CLTF must be located on a site without environmental constraints (e.g., no wetlands or threatened or endangered species)
- D.** The CLTF must be compatible with adjacent land uses and local zoning ordinances, if applicable
- E.** The CLTF site must meet the size requirement of at least 110 acres of unrestricted, available land for construction of the CLTF.
- F.** The CLTF must not be built on an active or past ordnance disposal area
- G.** The CLTF site must have access to all utilities, such as potable water, sanitary sewerage, electrical, telecommunications, and natural gas
- H.** The CLTF site must be in close proximity to dining and housing facilities
- I.** The CLTF site must be accessible for specialized military vehicles (i.e., wheeled vehicles, tracked vehicles, Heavy Expanded Mobility Tactical Truck [HEMTTs])
- J.** The CLTF must be in close proximity to adequate highway access via a major arterial route
- K.** Location/Size of available land area



- L. Have the available or potential to develop public service infrastructure to support the proposed facility, including water for potable/fire suppression use, wastewater treatment and disposal, electrical power, telecommunications, and natural gas
- M. Adjacent land uses
- N. Distance and routing to the active tactical vehicle training ranges at Fort Dix
- O. Supportive site infrastructure and capabilities
- P. Impact on each facility's current mission.

The above screening criteria were utilized in the evaluation of all potential alternative sites. The following presents a more detailed second screening used to select the NJARNG's preferred alternative, the preferred site must:

- A. Enable the NJARNG to construct a centralized CLTF in relative close proximity to the established active military training areas and firing ranges at Fort Dix
- D. Be compatible with adjacent land uses and/or local zoning ordinances (as applicable) governing the range of permitted land uses and intensity in the project area
- E. Provide the required amount of available land to facilitate construction of the CLTF
- C. Consist of an environmentally unconstrained land area (e.g., no wetlands or threatened or endangered species)
- J. Be able to provide adequate highway access via a major arterial route
- L. Have the availability or the potential to develop public service infrastructure to support the proposed facility, including water for potable/fire suppression use, wastewater treatment and disposal, electrical power, telecommunications, and natural gas.

Non-preferred alternatives were those that would not meet the aforementioned second screening criteria. Upon completion of the screening process, three possible alternatives were offered by Fort Dix for consideration.

Sections 3.1 through 3.5 identify alternatives to the Proposed Action that were considered by the NJARNG. **Tables 3-1a, 3-1b, and 3-1c** compare the relative advantages and disadvantages of each considered alternative, as determined during the NJARNG's preliminary siting analysis for proposed project components. **Table 3-2** summarizes primary alternatives evaluated in this EA.

3.1 Alternative 1: Implementation of the Proposed Action at Fort Dix, New Jersey

Alternative 1 would involve implementation of the Proposed Action at Fort Dix, New Jersey. Fort Dix accommodates existing troop training, small arms, artillery and tank ranges, a number of major Army administrative functions, additional training sites utilized by the Department of the Army, and various base tenant operations. These tenants utilize Post training, and administrative and correctional facilities on a daily basis. Fort Dix offered the following potential siting locations for the CLTF at Fort Dix:



- Training Area 4, located along Range Road directly across from the Mid-State Correctional Facility
- NJARNG UTES facility located in Training Area 9B near Range 85
- "Times Square" Area at Bivouac 15.

Locations of the Alternative 1 sites are depicted in **Figure 3-1**. These undeveloped and/or underutilized portions of the Fort Dix facility were examined for their potential to be developed for the CLTF. A Process Action Team was developed and met on a regular basis during 1996 and 1997 with the objective of siting a new, consolidated Military And Training Equipment Site (MATES) for the NJARNG on or in proximity to Fort Dix. This group was composed of a cross section of Fort Dix command and NJARNG staff.

Although the Process Action Team was developed in 1996, conditions at Fort Dix have not changed since then. The Process Action Team was formed with the primary objective of siting a location for a MATES; however, since that time, the project requirements evolved into the current CLTF, a larger facility with similar requirements. Fort Dix confirmed, in a memorandum dated 23 August 2005, that the conditions and availability of suitable sites within Fort Dix for the proposed NJARNG CLTF had not changed since 1996. (**Appendix A**)

As reviewed by the Process Action Team and based on the previous and following criteria, the sites included in Alternative 1 were eliminated for further consideration in this EA:

- The proposed site in Training Area 4 aimed to meet critical screening criteria **D, E, C, J, and L**. The Training Area 4 site did not meet critical criteria **A**. The Training Area 4 site is in a location that would require driving tactical vehicles approximately 10 miles along existing trails to reach the appropriate tactical vehicle firing ranges (Ranges 61, 65, and 85), and would result in a minimum of a 20-mile round trip. The NJARNG determined that the cost associated with fuel usage and potential vehicle maintenance precluded this site from further consideration for construction of the CLTF at the Training Area 4 site (NJARNG 1997). Construction of the CLTF at the proposed Area 4 site would require use of a tactical vehicle trail that would proceed east from Area 4, then turn north paralleling Cookstown Road, then turn east again along the northern boundary of Fort Dix before reaching the tactical vehicle firing ranges at Fort Dix. The present route of this trail requires significant coordination with Fort Dix Range Control, as portions of the trail are down range of Range 85 and the trail is closed when Range 85 is active. The NJARNG determined that this situation would jeopardize military training opportunities, thus removing the Training Area 4 site from further consideration for CLTF development (NJARNG 1997). (*NOTE: The NJARNG does not currently conduct training activities in Training Area 4.*)
- The UTES facility was determined to meet critical screening criteria **A, J, and L**. The UTES facility did not meet critical screening criteria **D, E, and C**. The UTES site is located on a parcel of land that is generally surrounded by wetland areas. The presence of wetlands presents environmental constraints that would limit expansion of this site (NJARNG 1997). The UTES facility is located at the top of a hill with relatively steep elevation changes. The presence of the steep slopes presents engineering challenges that would increase the cost of construction and would result in a facility layout that would not be functionally acceptable (NJARNG 1997).



- The "Times Square" site was determined to meet critical screening criteria **A, E, C, J,** and **L**. The "Times Square" site did not meet critical screening criteria **D** and is located near several artillery-firing positions. Noise generated from the artillery firing positions would potentially disrupt day-to-day activities at the CLTF site. For these reasons, the "Times Square" site was eliminated from further consideration in this EA (NJARNG 1997).

3.2 Alternative 2: Implementation of the Proposed Action at Other NJDMAVA Sites Within New Jersey

The NJDMAVA currently owns, operates, and maintains approximately 40 training, logistical support, and institutional sites around the state. These sites vary in current mission, as well as size and setting. These sites have been evaluated for the possibility of accommodating the proposed CLTF.

As shown in **Appendix B**, the majority of NJDMAVA's sites situated around New Jersey are Readiness Centers of a limited size, with many situated within or adjacent to densely populated civilian centers.

All NJDMAVA locations listed in **Appendix B** were evaluated using the site selection criteria defined in **Section 3.0**. All locations, except the Fort Dix UTES site, failed to meet the primary criteria for relative proximity to established military training areas and firing ranges on Fort Dix (i.e., critical criteria **A**). For this reason, all locations were dropped from consideration as viable alternatives for development of the CLTF.

3.3 Alternative 3: Implementation of the Proposed Action at the Former SATCOM Site at Lakehurst NAES - Preferred Alternative

Alternative 3, implementation of the Proposed Action on a 140-acre parcel in the western portion of Lakehurst NAES at the former Lakehurst SATCOM site as described in **Section 2.0**, has been determined by the NJARNG to be the Preferred Alternative, as it meets all of the "reasonable" screening criteria (**A, D, E, J,** and **L**).

Alternative 3, the Preferred Alternative, was determined to offer the optimum opportunity to accommodate the planned CLTF without adverse impacts to either ongoing and/or anticipated Navy actions at the Lakehurst NAES or to the physical environment. Alternative 3 provides a balance in allowing limited sharing of Lakehurst NAES base resources and infrastructure without diminishing the Lakehurst NAES's primary functions and objectives.

Currently, the NJARNG intensively utilizes the existing training and range areas on the undeveloped, eastern portion of the Fort Dix Military Reservation. As noted previously, one of the primary locational advantages of Alternative 3 is its proximity to the training areas and ranges at Fort Dix.

A crossing of Ocean County Route 539 is included as part of the Proposed Action in association with Alternative 3. This crossing would provide direct access/egress across adjacent lands situated within Fort Dix and would provide a defined crossing of Ocean County Route 539,



incorporating appropriate signage and warning signals. The routing into Fort Dix is proposed to utilize approximately 4,000 feet of an existing dirt road and to construct approximately 1,900 feet of new roadway, which would be minimally widened and would receive base stabilization through the use of crushed stone and/or recycled concrete.

3.4 Alternative 4: Implementation of the Proposed Action at Other Locations Within Lakehurst NAES

Alternative 4 involves construction of the CLTF at locations within the Lakehurst NAES other than the Preferred Alternative (Alternative 3). Based on an analysis of the overall Lakehurst NAES area and supported by an analysis the Lakehurst NAES Engineering/Environmental Office completed (see **Appendix A**), it was determined that the Alternative 3 site presented the most feasible site within Lakehurst NAES to implement the Proposed Action. The Lakehurst NAES Engineering/Environmental Office is part of the monthly Quality Review Board meetings and provides constant feedback on the evolution of the proposed CLTF site location and requirements. Furthermore, it has been determined that the evaluation of alternatives, summarized below, remains a valid analysis (see **Appendix A**).

A total of eight different locations were examined within Lakehurst NAES, using a series of applicable environmental and operational criteria in order to discern the optimal facility location, seven of which were dropped from further consideration. The eight locations within Lakehurst NAES considered for implementation of the Proposed Action include:

- Former SATCOM site, a 140-acre parcel located at the western end of Lakehurst NAES (Alternative 1 – Preferred Alternative) (see **Sections 2.0** and **3.3**)
- Eastfield site, located near the intersection of Hancock Road and Severyns Road on the eastern part of Lakehurst NAES
- Mooring Circles site, located near Hangars 5 and 6 and by the intersection of McCord Road and Rounds Road on the eastern part of Lakehurst NAES
- Vicinity of Building 342 near the intersection of Rounds Road and Rockwell Road on the eastern part of Lakehurst NAES
- The “Russian Ruins” site, located along Walker Road on the northern boundary of Lakehurst NAES
- Southwestern quadrant of the “Jump Circle” site, located in the central portion of Lakehurst NAES
- Borrow Pit area, located south of Test Track #5 in the central part of Lakehurst NAES
- Vicinity of Building 551, located near Clubhouse Road in the western part of Lakehurst NAES.

Figure 3-2 shows the location of the other areas within Lakehurst NAES that were considered but were removed from further consideration.

Based on the following criteria, as reviewed by the Process Action Team, the sites included in Alternative 4 were eliminated for further consideration in this EA:



- The proposed Eastfield site, located immediately adjacent to the U.S. Navy's API Laboratory, meets the critical screening criteria **E**, **C**, **J**, and **L**. It does not meet critical screening criteria **A**, and **D**. Further growth of the API's mission at Lakehurst would be limited if the Eastfield site were dedicated to any other use. Noise and vibration that would potentially be generated at the CLTF and its impact on operations at the API laboratory presented significant concerns. As a result, the Eastfield site was dismissed from further consideration due to potential negative impact the CLTF would have on the API Mission at Lakehurst (Lawlor 2001).
- The Mooring Circle site, located within the Historic District of the Lakehurst NAES, meets critical screening criteria **D**, **E**, **C**, **J**, and **L**, but does not meet critical screening criteria **A**. Although developing the Mooring Circle site is not prohibited, consultation with and approval from the New Jersey State Historic Preservation Office would be required. The location of the Mooring Circle site on existing paved areas between existing hangars makes it viable for the future expansion of aviation missions at Lakehurst NAES. Because the Mooring Circle site is located in an area of potential expansion of Naval missions at Lakehurst NAES, this site was removed from further consideration (Lawlor 2001).
- The Building 342 Vicinity site meets none of the critical screening criteria. It is located in an entirely wooded setting that contains significant wetland areas. Additionally, the eastern portion of this site is located within the munitions storage safety zone of the ammunition supply magazines at Lakehurst NAES. The Building 342 site was eliminated from further consideration due to limited acreage that could be developed due to aforementioned environmental and safety constraints at this location (Lawlor 2001).
- The "Russian Ruins" site meets critical screening criteria **D**, **E**, **C**, and **L**, but does not meet critical screening criteria **A** and **J**. This site is located in an entirely wooded setting and is bordered to the north by wetland areas that would limit access opportunities to this site. The "Russian Ruins" site was eliminated from further consideration due to deforestation requirements and the difficulty of providing access to the Site for military and non-military vehicles (Lawlor 2001).
- The Jump Circle site meets critical screening criteria **D**, **E**, and **L**, but does not meet critical screening criteria **A**, **C**, and **J**. This site is located in an area that presently receives a significant amount of use in support of numerous military functions and operations. Development of this site would eliminate or greatly reduce the ability to use the Jump Circle to support these operations. In addition, several threatened species of birds make this a nesting and breeding site. In fact, the Jump Circle site is the single, largest breeding site in New Jersey for at least one of these species. The Jump Circle site also has been eliminated from further consideration due to the impact that construction and CLTF operation at that site would have on natural resources and on Lakehurst NAES's ability to support other military functions (Lawlor 2001).
- The Borrow Pit site meets critical screening criteria **D**, **E**, **C**, **J**, and **L**, but does not meet critical screening criteria **A**. This site is located between two major testing sites: the Test Runway and the Recovery Systems Test Sites (RSTS). Expansion of operations or facilities in either of these testing areas would be limited if the CLTF is developed in this area. Due to the potential impact on testing mission expansion at the



Lakehurst NAES, the Borrow Pit site was eliminated from further consideration (Lawlor 2001).

- The Building 551 Vicinity meets critical screening criteria **D**, **E**, and **L**, but does not meet critical screening criteria **A**, **C** and **J**. The Building 551 Vicinity site is located in an area that is surrounded by wetland areas. The presence of wetlands in this area greatly reduces acreage that can be developed at this site. In addition, the Building 551 Vicinity site is the largest breeding site within the Lakehurst NAES for pine snake, which is a threatened species. The Building 551 Vicinity site was eliminated from further consideration due to environmental and natural resource constraints at this site (Lawlor 2001).

3.5 Alternative 5 – No-Action Alternative

As required under NEPA, CEQ regulations, and 32 CFR 651, the No-Action Alternative (Alternative 5) is retained in this EA for comparative analysis; the inclusion of the No-Action Alternative provides a valuable baseline to compare impacts with the Preferred Alternative. In the No-Action Alternative, the NJARNG would not build a new CLTF facility at any location. This alternative would allow the current substandard conditions, which exist both within logistical support and training facilities the NJARNG operates, to persist. Lacking an "in-state" consolidated logistics/training facility, the level of equipment and personnel support necessary for the NJARNG to fulfill its mission within New Jersey would continue to erode and would eventually have a negative impact on NJARNG's mission readiness. This, in turn, could affect the nation's overall military mission readiness. **Table 3-2** summarizes the actions proposed in both the Preferred Alternative (Alternative 3) and the No-Action Alternative (Alternative 5).



TABLE 3-1a
Comparison of Alternatives Considered

Advantages of Alternative	Criteria	Alternatives Considered				
		Alternative 3: Preferred	Alternative 5: No Action	Alternative 1: Fort Dix Sites*	Alternative 4: Other Lakehurst NAES Sites ¹	Alternative 2: Other NJDMAVA Property in New Jersey
Mission-Related Advantages						
Close proximity to the established active training areas and firing ranges at Fort Dix	A	X	N/A	X and N ⁺	N ⁻	N ⁻
Has required amount of available land to facilitate CLTF construction	E	X	N/A	N ⁻	X and N ⁺	N/A
Adequate highway access via a major arterial route	J	X	N/A	O	N ⁺	X
No impact to existing or proposed military operations	B	X	N/A	N ⁻	N ⁻	N/A
Availability or the potential to develop public service infrastructure to support the proposed facility	L	X	N/A	O	X	X
Meets mission requirements to consolidate NJARNG resources at one location	B	X	N/A	O	O	N ⁻
Environmental Advantages/Risks						
Avoids wetlands	C	N ⁺	X	N ⁻	X and N ⁻	N/A
Avoids potential hazardous waste sites	F	X	X	N/A	N/A	N/A
Avoids special status species habitat	C	N ⁺	X	N/A	X and N ⁻	N/A
Avoids historical/cultural resources	C	X	X	N/A	X and N ⁻	N/A
Compatible with adjacent land uses and/or local zoning ordinances	D	X	N/A	X	X	N/A

Key: X = Strong Advantage; O = Moderate Advantage; N⁻ = Strong Negative Aspect; N⁺ = Moderate/Minor Negative Aspect; N/A = Not Assessed

Note:

1. Alternatives 3 and 4 contain a variety of potential sites at Fort Dix and Lakehurst NAES, respectively, which were considered but eliminated from further consideration (see **Sections 3.3.1** and **3.3.2**). **Table 3-1a** provides a consolidated range of advantages/disadvantages for Alternatives 3 and 4. See **Tables 3-1b** and **3-1c** for the comparison of Fort Dix and Lakehurst NAES "sub-Alternatives."



TABLE 3-1b
Comparison of Fort Dix Sub-Alternatives (Alternative 3) Considered

Advantages of Alternative	Criteria	Alternative 1 Sub-Alternatives Considered		
		Alternative 1a: Training Area 4	Alternative 1b: NJARNG UTES	Alternative 1c: Times Square
Mission-Related Advantages				
Close proximity to the established active training areas and firing ranges at Fort Dix	A	N ⁺	X	X
Has required amount of available land to facilitate CLTF construction	E	O	N ⁻	X
Adequate highway access via a major arterial route	J	O	N ⁺	O
No impact to existing or proposed military operations	B	N ⁺	X	N ⁺
Availability or the potential to develop public service infrastructure to support the proposed facility	L	X	N ⁺	N ⁺
Meets mission requirements to consolidate NJARNG resources at one location	B	X	X	X
Environmental Advantages/Risks				
Avoids wetlands	C	N/A	N ⁻	N/A
Avoids potential hazardous waste sites	F	N/A	N/A	N/A
Avoids special status species habitat	C	N/A	N ⁻	N/A
Avoids historical/cultural resources	C	N/A	N/A	N/A
Compatible with adjacent land uses and/or local zoning ordinances	D	X	X	X

Key: X = Strong Advantage; O = Moderate Advantage; N⁻ = Strong Negative Aspect; N⁺ = Moderate/Minor Negative Aspect; N/A = Not Assessed



TABLE 3-1c
Comparison of Lakehurst NAES Sub-Alternatives (Alternative 4) Considered

Advantages of Alternative	Criteria	Alternatives Considered							
		Alternative 3: SATCOM Site	Alternativ e 4a: Eastfield Site	Alternative 4b: Mooring Circles	Alternative 4c: Building 342 Area	Alternative 4d: Russian Ruins	Alternative 4e: Jump Circle Southwest	Alternative 4f: Borrow Pit Area	Alternative 4g: Building 551 Area
Mission-Related Advantages									
Close proximity to the established active training areas and firing ranges at Fort Dix	A	X	N ⁻	N ⁻	N ⁻	N ⁻	N ⁻	N	N ⁻
Has required amount of available land to facilitate CLTF construction	E	X	X	X	N ⁺	O	X	O	N ⁻
Adequate highway access via a major arterial route	J	X	O	O	N ⁻	N ⁺	N ⁺	N ⁺	N ⁻
No impact to existing or proposed military operations	B	X	N ⁻	N ⁻	N ⁻	X	N ⁻	N ⁺	X
Availability or the potential to develop public service infrastructure to support the proposed facility	L	X	X	O	X	O	O	O	O
Meets mission requirements to consolidate NJARNG resources at one location	B	X	X	X	X	X	X	X	X
Environmental Advantages/Risks									
Avoids wetlands	C	X	X	N ⁻	N ⁻	N ⁺	X	X	N ⁻
Avoids potential hazardous waste sites	F	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Avoids special status species habitat	C	O	N/A	N/A	N/A	N/A	N ⁻	N/A	N ⁻
Avoids historical/cultural resources	C	X	N/A	N ⁻	N/A	N/A	N/A	N/A	N/A
Compatible with adjacent land uses and/or local zoning ordinances	D	X	N ⁻	X	N ⁻	X	X	X	X

Key: X = Strong Advantage; O = Moderate Advantage; N⁻ = Strong Negative Aspect; N⁺ = Moderate/Minor Negative Aspect; N/A = Not Assessed



TABLE 3-2
Summary of Alternatives to be Evaluated in this EA

Action Component	Alternative 3 Preferred Alternative	Alternative 5 No-Action Alternative
Acquire approximately 140 acres for construction of CLTF site.	To be accomplished via lease agreement with U.S. Navy	Do not acquire additional land
Phase 1: Wheeled Vehicle Maintenance Shop	Construct an 109,000-ft ² Wheeled Vehicle Maintenance Shop	Do not construct a new Wheeled Vehicle Maintenance Shop and continue to use the existing CSMS in Bordentown
Phase 2: Tracked Vehicle Maintenance Shop	Construct an 84,000-ft ² Tracked Vehicle Maintenance Shop	Do not construct a new Tracked Vehicle Maintenance Shop and continue to use the existing UTES at Fort Dix
Phase 3: Regional Training Facility	Construct a 90,000-ft ² Regional Training Site	Do not construct a new Regional Training Facility and continue to use existing Readiness Center facilities throughout the state
Phase 4: Controlled Humidity Vehicle Storage Facility and an Advanced Tank Bath Facility	Construct a 325,000-ft ² Controlled Humidity Vehicle Storage Facility and a 1,350-ft ² Advance Tank Bath	Do not construct a Controlled Humidity Vehicle Storage Facility or an Advanced Tank Bath
Construct a roadway to facilitate travel by various military tactical and non-tactical vehicles to Fort Dix Military Training Ranges and Training Areas	Construct a tank trail proceeding directly out of the proposed CLTF site and directly across Ocean County Route 539 onto Fort Dix and proceeding around Bivouac 19	Do not construct a roadway between Lakehurst NAES and Fort Dix
Upgrade the existing Lakehurst NAES South Boundary Road for access/egress to the developed eastern portion of the NAES	Upgrade South Boundary Road	Do not upgrade the existing South Boundary Road
Construct a paved road for access/egress between Ocean County Route 539 and the proposed CLTF	Construct paved access to the CLTF site	Do not construct paved access
Other ancillary features	Install potable water supply well; septic system; utilities, including electric, natural gas, and telecommunications; and perimeter fencing	Do not construct ancillary features



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4.0 AFFECTED ENVIRONMENT

4.1 General Overview

This section specifically describes current baseline conditions at the Lakehurst NAES, with emphasis on those resources potentially impacted by the Proposed Action and its alternatives. Within this section, “the project study area” generally refers to the proposed CLTF site within the Lakehurst NAES and that portion of Fort Dix where the proposed tank trail would be located (see **Figure 4-1**).

Section 5.0, Environmental Consequences, identifies potential direct, indirect, and cumulative effects of the identified project alternatives on each of the issue areas presented in this section. **Section 5.0** also contains management/mitigation measures that, when implemented, will reduce the level of identified impacts to acceptable levels.

4.2 Study Area Description

4.2.1 Geographic Setting

The project study area is located in Jackson Township, New Jersey, in the east-central part of the state. The project study area is approximately 45 miles east of Philadelphia, 65 miles south of New York City, 50 miles south of Newark, New Jersey, and 10 miles west of the Atlantic Ocean. The general location of the proposed CLTF site is presented in **Figure 4-1**.

4.2.2 General Landscape

Although the project study area is not “perfectly flat,” the topographic relief is such that the project study area landscape is considered a “generally flat” surface topography. The Site primarily consists of mature Pine/Oak - Oak/Pine forest, which covers approximately 80 percent of the Site. The balance of the Site is composed of herbaceous-dominated open fields (12.5 percent), successional vegetation (4 percent), and a number of cleared woods roads that transverse the Site in several directions (3.5 percent) (see **Section 4.8.3** for additional information).

4.2.3 Climate

Hot, humid summers and mild winters characterize New Jersey’s climate. The project study area is located in the Pine Barrens Climate Zone. The average temperature for coastal New Jersey ranges from a high of 74.7 degrees Fahrenheit (°F) in July to a low of 33.4 °F in January. The average annual precipitation for coastal New Jersey is 42.91 inches per year, with a majority of the total precipitation falling in the spring and summer months (New Jersey State Climatologist 2004).

4.3 Land Use

Land use includes natural conditions or human-modified conditions and activities occurring at a particular location. Human-modified land use categories include residential, commercial,



industrial, transportation, communications, utilities, agricultural, institutional, recreational, and other developed use areas. Management plans and zoning regulations determine the type and extent of land use allowable in specific areas and are often intended to protect specially designated or environmentally sensitive areas.

A variety of land uses are present within the immediate vicinity of the project study area, including military bivouacking, recreational pursuits, and commercial forestry operations. Land use in the project study area is characteristic of the region, consisting primarily of military uses. In general, the project study area is surrounded by Ocean County Route 539 (also known as Hornerstown Road) and the Fort Dix Military Reservation on the west, and by the Lakehurst NAES on the north, east, and south (see **Figure 4-1**).

4.3.1 Land Cover

Land cover at the project study area consists primarily of mature Pine/Oak - Oak/Pine forests, with herbaceous-dominant open fields, successional vegetation, and woods roads.

4.3.2 Aesthetics and Visual Resources

Visual resources are defined as the natural and manufactured features that comprise an area's aesthetic qualities. These features form an observer's overall impression of an area or of its landscape character. Landforms, water surfaces, vegetation, and manufactured features are considered characteristic of an area if they are inherent to the structure and function of a landscape. Project study area aesthetics are representative of the surrounding military-related area; no specifically identified aesthetic visual resources occur within the project study area.

The Lakehurst NAES and a portion of Fort Dix are located within the Pinelands Preservation Area as defined by the Pinelands Protection Act. In 1979, the State of New Jersey passed the Pinelands Protection Act, which defined various protection and management zones within the Pinelands National Reserve. The Preservation Area lies in the heart of the Pinelands environment and represents its most critical ecological region. The objective of the Preservation Area is to preserve large, contiguous tracts of land in natural states and to promote compatible agricultural, horticultural, and recreational use. In addition, if land development activities designed to advance the nation's military objectives are proposed, it must be demonstrated that such development can be accomplished without adverse impacts to the environmental resources of the Pinelands Area (New Jersey Pinelands Commission 2004b).

Two wildlife areas are located within 1 to 2 miles of the project study area. The first wildlife area is the Collier Mills Wildlife and Game Refuge, located north of the Lakehurst NAES. The second wildlife area is the Manchester Fish and Wildlife Area, located south of the Lakehurst NAES.

4.3.3 Building Function and Architecture

Currently, the project study area contains no structures. Historically, the proposed 140-acre CLTF site contained several barracks-like buildings that operated as SATCOM facilities during the 1950s. This program ended in 1962 and the facilities were dismantled in 1995.



4.3.4 Local Communities

Nearby communities include the Borough of Lakehurst, located southeast of the project study area. In general, these communities are not heavily developed. The area to the north is Collier Mills Wildlife and Game Refuge. The Fort Dix Military Reservation borders the Lakehurst NAES property to the west. The area to the south is the Manchester Fish and Wildlife Area. The remainder of the Lakehurst NAES property is bordered by privately owned lands consisting of special agricultural uses and vacant, forested lands.

4.3.5 Local Zoning

The Lakehurst NAES and the portion of Fort Dix associated with this proposal are physically located in Ocean County, New Jersey. The project study area lies within the Jackson Township political subdivision. The project study area is zoned Military Installation (MI), which permits uses associated with the function of the military installation or other essential public service, as long as (1) it is sanctioned by Lakehurst NAES and/or Fort Dix, and (2) it substantively meets environmental compliance standards of the Pinelands Comprehensive Management Plan. No zoning conflicts are associated with the proposed CLTF site.

4.3.6 Property Status

The U.S. Navy owns the Lakehurst NAES. Currently, the Lakehurst NAES and the NJARNG are reviewing a long-term leasing agreement for use of the proposed CLTF site.

4.4 Air Quality

4.4.1 Regulatory Framework

The U.S. Environmental Protection Agency (USEPA) is the overall regulatory agency for air quality throughout the U.S. The primary regulatory authority for air quality in New Jersey is the NJDEP. Applicable regulations are set forth in the New Jersey Administrative Code (N.J.A.C.), Title 7, Chapter 27 - Air Pollution Control Board. The NJDEP regulates industrial and commercial sources of air pollution that are required to comply with appropriate Federal, state, and local rules governing air emissions.

Federal air quality regulations are provided in the Clean Air Act (CAA) of 1970 and the Clean Air Act Amendments (CAAA) of 1990. These regulations provide a comprehensive national program with the collective goal of reducing pollutant levels in the ambient air. Title I of the CAAA requires air pollution source owners located in ozone non-attainment areas (see **Section 4.4.3**) to submit an emission statement to local or state regulatory authorities (see **Section 4.4.4**). The emission statement should identify and quantify air emissions of sulfur oxides (SO_x), nitrogen oxides (NO_x), and Volatile Organic Compounds (VOCs) from stationary sources.

4.4.2 Ambient Air Quality

Ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The CAAA requires USEPA to set NAAQS for pollutants considered harmful to public health and the



environment. NAAQS are provided for six principal pollutants, called criteria pollutants (as listed under Section 108 of the CAA), including the following:

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen oxides (NO_x)
- Ozone (O₃)
- Particulate matter, divided into two size classes:
 - Aerodynamic size less than or equal to 10 micrometers (PM₁₀)
 - Aerodynamic size less than or equal to 2.5 micrometers (PM_{2.5}).
- Sulfur dioxide (SO₂).

Criteria pollutants are relatively common throughout the U.S. They are believed to be detrimental to public health and the environment, and are known to cause property damage. The project study area is located in a rural area; therefore, the local air quality and criteria pollutant emissions are not an issue within the vicinity of the proposed CLTF site, except for ozone (see **Section 4.4.3**).

4.4.3 Criteria for Attainment/Non-Attainment Areas

Areas are designated as “attainment,” “non-attainment,” “maintenance,” or “unclassified” with respect to the NAAQS. General air quality monitoring is conducted in areas of high population density and near major sources of air pollutant emissions. Rural areas are typically not considered in such monitoring; however, Colliers Mills monitoring station is located in Ocean County, New Jersey. Regions that comply with the standards are designated as attainment areas. Areas for which no monitoring data are available are designated as unclassified and are, by default, considered to be in attainment of the NAAQS. In areas where the applicable NAAQS are not being met, a non-attainment status is designated (USEPA 2004).

Currently, Ocean County does not meet the NAAQS for ozone and is classified as moderate non-attainment for ozone; Ozone 1-hour average concentration is 0.126 parts per million (ppm); Ozone 8-hour average concentration is 0.116 ppm. Ocean County is in attainment for all other criteria pollutants (CO, NO_x, PM₁₀, PM_{2.5}, SO₂, and Pb) (USEPA 2004).

4.4.4 Existing Emissions Sources

The proposed project area does not currently possess any permitted emission sources (see **Section 4.4.5**). However, everyday operation of facilities and equipment at the Lakehurst NAES result in the following fugitive or insignificant sources, which are non-quantified at this time:

- Aircraft activities
- Aircraft fueling operations
- Ground-based vehicular traffic.

Primary thoroughfares within a 3-mile radius of the facility that also contribute pollutants affecting local air quality include Ocean County Route 539 and New Jersey Route 70. Although no stationary sources of air pollution are present at the project study area, the Lakehurst NAES



is listed as a “Major Facility” by the NJDEP and is subject to the NJDEP Major Facility Operating Permit Rules.

4.4.5 Existing Air Pollution Source Permits

The project study area does not currently possess any significant stationary sources of air pollution.

4.4.6 Proximate Sensitive Receptors

With regard to air quality, sensitive receptors include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers. These sensitive population segments and facilities correspond with those that the primary NAAQS propose to protect. No sensitive receptors are located within 1 mile of the project study area.

4.4.7 Local Meteorological Conditions

The project study area is located within the Pine Barrens Climate Zone in the coastal region of the State of New Jersey. The Pine Barrens Climate Zone differs from other zones due to porosity and low fertility of soils that support dominant scrub pine and oak forests in the region. Precipitation rapidly infiltrates the sandy soils, leaving the area drier than adjacent regions and more subject to wildfires than adjacent regions. Prevailing westerlies sweep in from the middle latitudes that shift from north and south. Local meteorological conditions at the project study area may be conducive to transporting airborne pollutants to adjacent properties and sensitive receptors near the project study area (ARH 2002).

4.4.8 Compliance with Federal/State Implementation Plans

Title III of the CAAA established a program for controlling emissions of Hazardous Air Pollutants (HAPs). Under Title III, emission standards have been developed for sources that emit any of the chemical compounds listed in the Act. Initially, Title III affected major industrial sources of HAPs. A major source is any facility that emits 10 tons or more per year of any HAP, or 25 tons of any combination of HAPs. These sources of emissions must be identified and are required to obtain an operating permit and comply with federally mandated control technology (i.e., Maximum Achievable Control Technology [MACT]) based on emission standards and other conditions. While some HAPs will be emitted during vehicle usage, the proposed CLTF should not exceed regulatory thresholds and is not subject to the above requirements.

4.4.9 General Conformity Rule

The General Conformity Provision of the CAA (42 USC 7401 *et seq.*; 40 CFR 50-87) Section 176(c), including the USEPA’s implementation mechanism, the General Conformity Rule (40 CFR 51, Subpart W), requires Federal agencies to prepare written Conformity Determinations for Federal actions in or affecting NAAQS non-attainment areas or maintenance areas (see **Section 4.4.3** and **Appendix F**). Since Ocean County, and most of the areas in the Northeast Transport Corridor, is currently in non-attainment status for ozone, the procedural requirements of the General Conformity Rule are in effect for the Proposed Action (USEPA 2004).



4.5 Noise

4.5.1 Regulatory Framework

Under NEPA, the Noise Control Act of 1972 (Public Law [P.L.] 92-574), EO 12088, Army Regulation (AR) 200-1, and 32 CFR 651, the NJARNG is required to assess the environmental impact of noise that its activities produce. Within such an assessment, strategies are promulgated to protect both on- and off-site receptors from environmental noise.

The noise environment at the project study area includes the effects of non-impulse noise. Non-impulse noise is generated from continuous, low-energy noise sources, such as tracked vehicles, wheeled vehicles, and POVs. The unit of measure for non-impulse noise is A-weighted in decibels (dBA) over a 24-hour day-night level (L_{dn}). Federal agencies generally agree that an L_{dn} below 65 dBA (Zone I) is compatible with residences, nursing homes, schools, and similar land use types. An L_{dn} above 75 dBA (Zone III) is generally considered unacceptable for these land uses. Between 65 dBA and 75 dBA (Zone II), noise attenuation measures are recommended in the design and construction of public and quasi-public service buildings.

AR 200-1 and 32 CFR 651 require that noise impact analyses be conducted at the local level for ARNG operations. Every effort is made to schedule noisy training activities in temporal periods of least impact (i.e., daytime hours).

4.5.2 Current and Projected Future Noise Environment at the Proposed CLTF

Currently, no noise is generated within the project study area; however, the Proposed Action will generate two types of noise. Construction of the new facilities would generate the first noise source. Through daily operations of the proposed CLTF, vehicles would generate the second noise source.

Based on data presented in the USEPA publication, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, PB206717*, outdoor construction noise levels range from 78 dBA to 89 dBA at approximately 50 feet from a typical construction site (USEPA 1971). **Table 4-1** presents typical noise levels (dBA at 50 feet) estimated by the USEPA for the main phases of outdoor construction.

TABLE 4-1
Typical Noise Levels Associated with Outdoor Construction

Construction Phase	DBA L_{eq} at 50 feet from Source
Ground clearing	84
Excavation, grading	89
Foundations	78
Structural	85
Finishing	89



The maximum number of on-site vehicles on any given day will be approximately 2,000. Like construction noise, vehicle noise is relatively localized. The Federal Highway Administration's Traffic Noise Model (TNM) was used to evaluate noise levels for a roadway with 2,000 vehicles passing in a 1-hour period. Results showed that the 65 dBA contour would extend approximately 600 feet from the road centerline. The proposed CLTF site is located approximately 2 miles from the nearest residential community in Lakehurst, New Jersey.

4.5.3 Noise Sources

Noise sources in the region include vehicular traffic on Ocean County Route 539, military wheeled and track vehicles traversing Fort Dix to the west of the proposed CLTF site, and military training ranges at Fort Dix.

4.5.4 Proximate Sensitive Receptors

Sensitive receptors located in proximity to the project study area were previously discussed in relation to air quality in **Section 4.4.6**. No sensitive receptors are located within 1 mile of the project study area.

4.6 Geology, Topography, and Soils

4.6.1 Geology

New Jersey contains five major geomorphic provinces: Inner Coastal Plain, Outer Coastal Plain, Piedmont, Highlands, and Valley and Ridge. The Proposed CLTF is situated within the Outer Coastal Plain. The Outer Coastal Plain is New Jersey's largest physiographic region, occupying 3,400 square miles (45.2 percent of the state). It consists of sedimentary deposits dating from the Tertiary period, with overlying patches of sand and gravel. In general, the Outer Coastal Plain contains a greater amount of sand and exhibits gentler terrain than the adjacent inner Coastal Plain (ARH 2002).

The proposed CLTF site is located entirely within the New Jersey Coastal Plain, a wedge of unconsolidated sediments that dips and thickens to the southeast. The New Jersey Geologic Survey indicates that the Site lies entirely within an outcropping of the Beacon Hill Gravel formation, an integral part of the Kirkwood-Cohansey Aquifer system. This formation consists of light-colored sandy quartz gravel, is considered a fluvial deposit of Miocene times, and overlies the Cohansey Sand formation. Throughout most of its subsurface extent, the Kirkwood-Cohansey Aquifer is predominantly a water-table aquifer, but locally perched water tables and underlying Cohansey Sand formation are located to the east, south, and west of the Site (ARH 2002).

4.6.2 Topography

The topography of Ocean County consists of gently rolling lands with few steep slopes. Most of the County consists of slopes less than 5 percent (approximately 95 percent of the land area). The topographic profile of the proposed CLTF site is generally flat with a mean elevation of 160 feet. In general, elevations range from 130 feet above mean sea level (amsl), in the



southeastern corner of the project study area, to 190 feet amsl in the north-central portion of the Site (see **Figure 4-2**).

4.6.3 Soil Types and Characteristics

The majority of soils present within the project study area are members of the Downer-Evesboro association. This association is characterized by nearly level, gently sloping, excessively drained, and well-drained soils. Primary limitations for land use are droughtiness, rapid permeability, low fertility, and the hazard of wildfires (USDA 1980).

Nine soil types are located within the project study area.

1. **Atsion sand (Ats)** is characterized as nearly level, poorly drained soil. The permeability of Atsion sand is moderately rapid. If the soil is drained, available water capacity is low, but water is available to plants from the water table. The seasonal high water table is between the surface and a depth of 1 foot from November to June. Some areas have water ponded on the surface. In the summer months, the water table is at a depth of 2 feet to 3 feet. Areas adjacent to perennial streams are subject to rare or occasional flooding. The seasonal high water table limits Atsion sand for most urban uses. This soil is in capability subclass Vw.
2. **Downer loamy sand, 0-5 percent slope (DocB)** is characterized as nearly level to gently sloping, well-drained soil. Downer loamy sand has a low to moderate available water capacity, and the permeability of this soil is moderate or moderately rapid. Downer loamy sand has a slight water erosion hazard and a severe wind erosion hazard. Runoff is slow. This soil is generally suitable for most urban uses and is in capability subclass IIs.
3. **Evesboro sand, 0-5 percent slope (EveB)** is characterized as gently sloping, well-drained soil. Evesboro sand has a low available water capacity, and the permeability of this soil is rapid. This sand has a moderate water erosion hazard and a severe wind erosion hazard, and runoff is slow. This soil is generally suitable for most urban uses and is in capability subclass VIIs.
4. **Lakehurst sand, 0-3 percent slope (LakB)** is characterized as nearly level, moderately well drained or somewhat poorly drained soil located in depressed areas and on low terraces. Lakehurst sand has a low available water capacity, and the permeability of this soil is rapid in the subsoil and substratum. This sand has a moderate wind erosion hazard and runoff is slow. This soil is in capability subclass IVw.
5. **Lakewood sand, 3-5 percent slope (LasB)** is characterized as nearly level to gently sloping, excessively drained soil. Lakewood sand has a low available water capacity, and the permeability of this soil is moderate to rapid. The hazard of wind erosion is severe and runoff is slow. This soil is generally suitable for most urban uses, but the loose, sandy surface is a limitation for recreational uses and the rapid permeability limits use for sanitary landfills. This soil is in capability subclass VIIs.
6. **Lakewood sand, 5-10 percent slope (LasC)** is characterized as sloping, excessively well-drained soil. Lakewood sand has a low available water capacity, and its



permeability is rapid. The hazard of water erosion for Lakewood sand is moderate and runoff is medium. This soil is in capability subclass VII_s.

7. **Manahawkin muck (Makt)** is characterized as nearly level, very poorly drained soil on floodplains adjacent to large streams, in depressional areas, and on broad flats. Manahawkin muck has a high available water capacity, and the permeability of this soil is moderately slow to moderately rapid. Areas of this soil are subject to frequent flooding. This soil is limited for most urban uses by flooding, the seasonal high water table, and subsidence of the surface layer. This soil is in capability subclass VII_w.
8. **Pits, Sand and Gravel (PHG)** consists of deep, excessively drained to very poorly drained soil material that is dominantly made up of the spoil in a borrow pit, sand pit, gravel pit, or clay pit during mining or after mining has taken place. Permeability is variable, and the available water capacity is low in sandy areas and moderate in clay areas. This unit is not assigned to a capability subclass.
9. **Urban land (UR)** consists of areas where more than 80 percent of the surface is covered by asphalt, concrete, buildings, or other impervious surfaces. The areas generally range from 10 to 100 acres and are nearly level to gently sloping. This unit is not assigned to a capability subclass.

Locations of soils found at the project study area are shown in **Figure 4-3**. Soil characteristics are summarized below in **Table 4-2**.

The Land Use Capability Class indicates the suitability of the soil for cultivation. Soils within the project study area are categorized as Class II_s for Downer loamy sand soils, and as Class VII_s for Evesboro sand and Lakewood sand soils (see **Table 4-2**). Class II_s soils have moderate limitations that require special conservation practices due to its droughty soils. Class VII_s soils have severe limitations that restrict their use for cultivation due to its droughty soils (USDA 1980).

4.6.4 Prime and Unique Farmlands

Prime Farmlands are monitored by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) to ensure preservation of agricultural lands that are of statewide or local importance. Soils designated as prime farmland are capable of producing high yields of various crops when managed using modern farming methods. Designation of such lands is based on present soil type. Soil types qualifying as prime farmlands are identified by the NRCS. None of the soil types within the project study area are designated as prime farmland and/or farmland of statewide importance (see **Table 4-2**; **Figure 4-3**).

4.6.5 Hydric Soils

Hydric soils are defined as soils that formed under the conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the subsurface. In addition, hydric soils are typically associated with wetland areas. According to the USDA-NRCS, two of the soils within the project study area have been identified as being hydric or having hydric components: Atsion sand and Manahawkin muck (USDA 1980).



TABLE 4-2
Soil Types Present Within the Proposed CLTF Site

Soil Type	Symbol	Slope (%)	Land Use Capability Class	Hydric Status	Agriculture Status	Location
Atsion sand	Ats	----	Vw	Hydric	Not Reported	Alternative 3 (proposed gas line)
Downer loamy sand	DocB	0-5	Ils	Not Reported	Not Reported	Alternative 3 (proposed CLTF site, proposed tank trail, and proposed gas line)
Evesboro sand	EveB	0-5	Vlls	Not Reported	Not Reported	Alternative 3 (proposed CLTF site)
Lakehurst sand	LakB	0-3	IVw	Not Reported	Not Reported	Alternative 3 (proposed gas line)
Lakewood sand	LasB	0-5	Vlls	Not Reported	Not Reported	Alternative 3 (proposed gas line)
Lakewood sand	LasC	5-10	Vlls	Not Reported	Not Reported	Alternative 3 (proposed CLTF site and proposed gas line)
Manahawkin muck	Makt	----	Vllw	Hydric	Not Reported	Alternative 3 (proposed gas line)
Pits, sand, and gravel	PHG	----	Not Reported	Not Reported	Not Reported	Alternative 3 (proposed CLTF site)
Urban land	UR	----	Not Reported	Not Reported	Not Reported	Alternative 3 (proposed gas line)

Source: USDA 1980

4.7 Water Resources

4.7.1 Regulatory Framework

Protection and management of water resources at the project study area are mandated by a number of laws, regulations, and guidances. Within the U.S., "waters of the U.S." are regulated under Sections 401 (33 USC 1341) and 404 (33 USC 1344) of the Federal Clean Water Act. No features (i.e., navigable waterways) subject to regulation under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) are present at the Site. The primary Federal regulations and guidance that govern water resources development, usage, and discharges at Federal sites, or sites affected by Federal (e.g., U.S. Army) activities, include the following:

- Federal Water Pollution Control Act of 1972 (FWPCA), as amended by the Clean Water Act of 1977 (CWA) (33 USC 1251 *et seq.*)¹

¹ The FWPCA, as amended by the CWA, regulates the potential for degradation and actual degradation of the waters of the United States, with the objective of maintaining and restoring their chemical, physical, and biological integrity. Guidelines regarding the control or discharge of dredged or fill material in waters of the U.S., including wetlands, are listed in Sections 401 and 404 of the CWA, as well as 33 USC 1344(b) and 1361(a).



- Land and Water Conservation Act of 1976 (16 USC 460)
- NEPA (42 USC 4321 *et seq.*)²
- National Pollutant Discharge Elimination System (NPDES) Wastewater Permits (33 USC 1342)
- Pollution Prevention Act of 1990 (PPA) (42 USC 13101-13109)
- Safe Drinking Water Act of 1974 (SDWA) (42 USC 300f *et seq.*)
- Soil and Water Resources Conservation Act of 1977 (16 USC 2001)
- Superfund Amendments and Reauthorization Act of 1986 (SARA) (P.L. 99-499; 40 CFR 300)
- Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 USC 11011)
- Water quality programs in general (33 USC 1160 *et seq.* and 1251 *et seq.*, 42 USC 300f *et seq.* and 6901 *et seq.*)
- Water Resources Development Act of 1990 (WRDA) (33 USC 2309a, 2316, and 2320)
- Wild and Scenic Rivers Act of 1968 (WSRA) (16 USC 1271 *et seq.*)
- AR 200-1, Environmental Protection and Enhancement
- 32 CFR 651, Environmental Effects of Army Actions
- AR 200-3, Natural Resources—Land, Forest, and Wildlife Management
- Air Force Instruction (AFI) 32-7041, Water Quality Compliance
- AFI 32-7045, Environmental Compliance Assessment and Management Program
- AFI 32-7064, Integrated Natural Resources Management
- EO 11988, Floodplain Management, 24 May 1977
- EO 11990, Protection of Wetlands, 24 May 1977
- EO 11991, Protection and Enhancement of Environmental Quality, 24 May 1977
- EO 12856, Federal Facilities Compliance with the Toxic Release Inventory (TRI) requirements of Title III, Section 313 of SARA, 3 August 1993.
- Pinelands Comprehensive Management Plan (New Jersey Statutes Annotated [N.J.S.A.] 13:18A-1 *et seq.*, N.J.A.C. 7:50 *et seq.*)

Water resources at the project study area are also regulated under the jurisdiction of the NJDEP. The NJDEP has the primary responsibility for protecting New Jersey's surface and ground waters from pollution caused by improperly treated wastewater and its residuals, as well as destruction of watersheds from development. The New Jersey regulations and guidance for water resources at the Site include the following (NJDEP 2004):

² Section 102(2)(H) of NEPA requires that conducted analyses will consider "ecological information" in planning and development. This requirement and ARs 200-1 and 200-3 require that analyses conducted pursuant to NEPA investigate potential effects to terrestrial, avian, and aquatic species and habitats. As such, water resources are included in this description.



- New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 *et seq.*)
- Water Quality Planning Act (N.J.S.A. 58:11A-1 *et seq.*)
- Spill Compensation and Control Act (N.J.S.A. 58:10-23.11 *et seq.*)
- Safe Drinking Water Act (N.J.S.A. 58:4A-4.1 *et seq.*)
- New Jersey Ground Water Quality Standards (N.J.S.A. 58:12A-1 *et seq.*)
- Water Pollution Control Act (N.J.A.C. 7:14)
- Flood Hazard Area Control Act (N.J.S.A. 58:16A-50 *et seq.*)
- Pinelands Comprehensive Management Plan.

Water resources at the proposed CLTF site are managed according to these and other applicable environmental laws and regulations.

4.7.2 Surface Water Resources

No surface water features exist within the proposed CLTF site. The proposed natural gas line crosses North Ruckles Branch and four tributaries to Middle Ruckles Branch; however, the proposed natural gas line would be installed down the middle of the existing South Boundary Road, and would be directionally trenched underneath wetlands and surface waters (see **Figure 4-4**).

4.7.3 Floodplains and Wetlands

4.7.3.1 Floodplains

Floodplains are generally areas of low, level ground located on one or both sides of a stream channel that are subject to either periodic or infrequent inundation by floodwaters. Floodplains are most likely the result of the natural processes of lateral erosion and deposition that occur as a river valley widens. The porous material that composes the floodplain is conducive to retaining water that enters the soil via flooding events and elevated groundwater tables. Periodic inundation dangers associated with floodplains have prompted Federal, state, and local legislation to limit development in these areas to recreation, agriculture, and preservation activities. The Federal Emergency Management Agency (FEMA) regulates floodplains with standards outlined in 44 CFR 60.3.

EO 11988 (24 May 1977) provides guidance on floodplain management. This EO requires each Federal agency to amend existing regulations or procedures to ensure that the potential effects of any action the agency may take in a floodplain are evaluated and that the agency's planning programs and budget requests reflect consideration of flood hazards and floodplain management. Guidance for implementation of EO 11988 is provided in the Floodplain Management Guidelines of the U.S. Water Resources Council (40 CFR 6030, 10 February 1978). It is the intent behind this EO that Federal agencies implement these requirements through existing procedures, such as those established to implement NEPA. 32 CFR 651 provides guidance for floodplain management on ARNG properties as a sub-analysis of the NEPA process.



Based on available data that FEMA has supplied, the project study area and the proposed tank trail are not located within a 100- or 500-year floodplain. However, the proposed natural gas line passes through a 100-year floodplain of North Ruckles Branch (see **Figure 4-5**).

4.7.3.2 Wetlands

Wetlands are defined as areas that are inundated by surface or groundwater with a frequency sufficient to support, and under normal circumstances do or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth/reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas, such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

EO 11990 (24 May 1977) provides guidance on wetlands management. It is the intent of this EO that Federal agencies implement these requirements through existing procedures, such as those established to implement NEPA. This EO requires each Federal agency to provide leadership and take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out that agency's responsibilities for:

- Acquiring, managing, and disposing of Federal lands and facilities
- Providing federally undertaken, financed, or assisted construction and improvements
- Conducting Federal activities and programs affecting land use, including, but not limited to, water and related land resources planning, regulating, and licensing activities.

32 CFR 651 provides guidance for wetlands management as a sub-analysis of the NEPA process. The National Wetland Inventory (NWI) map indicates that wetlands do not occur within the project study area or within the proposed tank trail. The proposed natural gas line passes through wetland areas; however, the proposed natural gas line would be installed down the middle of the existing South Boundary Road, and would be directionally trenched underneath wetlands and surface waters (see **Figure 4-6**).

4.7.4 Groundwater Resources

Groundwater below the project study area is from the Cohansey Sand Aquifer formation. The rocks of the Early Mesozoic basin include sandstone, arkose, and conglomerate. Due to compaction and cementation, only a small portion of groundwater moves between pores. Instead, groundwater primarily moves through joints, fractures, and bedding planes parallel to the strike of beds (USGS 2004).

The project study area lies within the Toms River Drainage Basin. The basin is relatively small (191 square miles), and the residence time for surface drainage water is short. Drainage from the Lakehurst NAES discharges to the Ridgeway and Harris Branches to the north, and to the Black, Manapaqua, and North Ruckles Branches to the south. All five streams discharge into Toms River. Several headwater tributaries to these originate at the Lakehurst NAES. No drainages or streams are directly located within the project study area or within the proposed tank trail. The proposed natural gas line crosses North Ruckles Branch and four tributaries to



Middle Ruckles Branch; however, the proposed natural gas line would be installed down the middle of the existing South Boundary Road, and would be directionally trenched underneath wetlands and surface waters (see **Figure 4-4**).

The Cohansey Sand Aquifer is relatively shallow in depth and is highly permeable, making potential contamination a high concern. Due to the acidic nature of the aquifer, naturally occurring radium (radium-224) is readily dissolved and has elicited concern over the effects of long-term human exposure to such radioactivity. These contaminants do not pose an immediate public health threat, but chronic exposure is believed to increase the risk of certain types of cancer (ARH 2002).

As part of the Preliminary EA conducted by Adams, Rehmann & Heggan Associates, Inc. (ARH), one “deep” and 18 “shallow” groundwater monitoring wells were installed within the project study area by M&R Soil Investigations. Located strategically throughout the 140-acre site, the monitoring wells, identified as Monitoring Well (MW)-1 through MW-19, were installed in order to determine the existence of, and to define the magnitude of, groundwater contamination (see **Table 4-3**).

TABLE 4-3
Contaminant/Water Quality Parameters Present Within the Proposed CLTF Site

Constituent	New Jersey Ground-water Quality Criteria (µg/L)	New Jersey and Federal Drinking Water Standards (µg/L)	PQL (µg/L)	Maximum Concentration Reported ¹ (µg/L)	Monitoring Well													
					1	2	3	4	6	7	8	11	12	15	17	18	19	
Aldrin	0.002	1.0	0.04	0.052									X					
Antimony	2.0	6.0	20.0	5.5						X								
Chloroform	6.0	100.0	1.0	3.6		X						X			X	X		
Chromium	100.0	100.0	10.0	38.1	X	X	X	X					X	X		X		
Tetrachloro-ethene	0.4	1.0	1.0 ³	26.6											X	X		
Trihalo-methanes ²	NA	80.0	NA	16.0												X		
Zinc	5,000	5.0	30.0	31.5	X				X		X		X	X		X		

Sources: N.J.A.C. 7:9-6 Ground Water Quality Standards, NJDEP 2002

Notes:

- Some constituents were reported at more than one monitoring well; therefore, a maximum concentration has been reported.
 - Denoted as the total concentration of the following four parameters: bromoform, chloroform, chlorodibromomethane, and dichlorobromomethane.
 - NJ MCL [A-280].
- NA = Not Available
PQL = Practical Quantitation Levels
X = Indicates that the constituent was detected at a concentration at or above the PQL or New Jersey ground water quality criteria.



Table 4-3 displays the contaminant/water quality parameters detected above clean-up standards in the monitoring wells installed within the project study area. In addition, **Table 4-3** provides the ground water quality standards as well as the Practical Quantitation Levels (PQLs) for each constituent present, per the N.J.A.C. 7:9-6 *Ground Water Quality Standards*. PQLs refer to the lowest concentrations of a constituent that can be reliably achieved among laboratories within specified limits of precision and accuracy during routine laboratory operating conditions.

As indicated in **Table 4-3**, eight constituents have been identified as being above the ground water quality standards and/or the PQLs:

- Aldrin is above both the ground water quality standard and the PQL at a maximum concentration of 0.052 micrograms per Liter ($\mu\text{g/L}$)
- Antimony is above the ground water quality standard at a maximum concentration of 5.5 $\mu\text{g/L}$
- Chloroform is above the PQL at a maximum concentration of 3.6 $\mu\text{g/L}$
- Chromium is above the PQL at a maximum concentration of 38.1 $\mu\text{g/L}$
- Tetrachloroethene is above both the ground water quality criteria, and the PQL at a maximum concentration of 26.6 $\mu\text{g/L}$
- Trihalomethanes were reported at a maximum concentration of 16.0 $\mu\text{g/L}$
- Zinc is above the PQL at a maximum concentration of 31.5 $\mu\text{g/L}$.

In addition to the contaminants identified in **Table 4-3**, Radionuclides, reported as a gross alpha activity, were detected in almost all of the wells and at a maximum concentration of 501 picoCuries per Liter (pCi/L). Radium 226 concentrations ranged between non-detect and 0.489 pCi/L, while radium 228 concentrations ranged between 1.08 and 3.45 pCi/L in tested wells. Also, radionuclides as gross beta were detected at a concentration of 10.4 pCi/L. Combined, radium 226 and radium 228 has a Maximum Contaminant Level (MCL) (i.e., the maximum level of a regulated contaminant allowed by Federal or state law) of 5 pCi/L. The MCL for gross alpha particle activity (including radium 226 but excluding radon and uranium) is 15 pCi/L (NJDEP 2002).

To identify groundwater flow characteristics, ARH personnel collected groundwater elevation data during the sampling conducted in July 2001. Data from the 12 monitoring wells was analyzed using survey information collected by Maitra Associates, and was utilized in calculating flow direction and gradients. This data indicated that groundwater flow was in an east-northeasterly direction, toward the headwaters of North Ruckles Branch with a calculated gradient of approximately 1.8×10^{-3} feet per foot.

ARH personnel collected a second round of groundwater elevation data during the sampling conducted in October 2001. Data from the 12 monitoring wells was utilized in calculating flow direction and gradients. This data indicates that groundwater flows in an east-northeasterly direction, toward the headwaters of North Ruckles Branch with a calculated gradient of approximately 2.0×10^{-3} feet per foot.



ARH personnel collected a third round of groundwater elevation data in January 2002. Data from the 18 monitoring wells was utilized in calculating flow direction and gradients. This data indicates that groundwater flows in an east-northeasterly direction, toward the headwaters of North Ruckles Branch with a calculated gradient of approximately 1.9×10^{-3} feet per foot.

4.7.5 Water Providers

No water is currently provided at the project study area. However, the Lakehurst NAES owns and operates three public water systems. The first public water system is located near the installation headquarters. The second public water system is in the Building 551 area. The third public water system is located at the catapult test sites. The Lakehurst NAES possesses an NJDEP Water Allocation Permit (#5366), which allows for the diversion of 21 million gallons of water per month from the underlying aquifer. Current diversion rates are estimated at 16 million gallons per month, with additional needs expected (ARH 2002).

4.8 Biological Resources

4.8.1 Regulatory Framework

Protection and management of biological resources at the proposed CLTF site is mandated by a number of laws, regulations, and guidances. The primary statutes, regulations, EOs, and guidances that direct, and apply to, the management of biological resources at the Site includes the following:

- Endangered Species Act of 1973 (ESA) (16 USC 1531 *et seq.*)³
- Endangered Species Preservation Act of 1966 (16 USC 1531)
- Engle Act of 1958 (10 USC 2671)
- Federal Insecticide, Fungicide, and Rodenticide Act of 1947 (7 USC 136)
- Federal Noxious Weed Act of 1975 (7 USC 2801)
- FWPCA, as amended by the CWA (33 USC 1251 *et seq.*)⁴
- Fish and Wildlife Conservation Act of 1980 (16 USC 2901 *et seq.*)
- Fish and Wildlife Coordination Act of 1934 (16 USC 661 *et seq.*)
- Migratory Bird Conservation Act of 1966 (16 USC 715)
- Migratory Bird Treaty Act of 1918 (16 USC 703-711)
- NEPA (42 USC 4321 *et seq.*)⁵

³ The protection of federally listed species is regulated under the ESA. Section 7 of the ESA dictates that Federal actions should not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of critical habitat of such species. AR 200-3 provides direction for implementation of the ESA on Army (or ARNG) installations per EO 11990. In addition, NEPA review and consideration of state-listed species is required per Section 5-3(q) of 32 CFR PART 651. Furthermore, Section 7(a) of the ESA requires formal consultation with the USFWS whenever a Federal proponent anticipates taking any action that may affect a listed species or critical habitat.

⁴ The FWPCA regulates the potential for degradation and actual degradation of the waters of the United States, with the objective of maintaining and restoring their chemical, physical, and biological integrity (USACE 1987 Wetland Delineation Manual). The CWA may be applied specifically to deposition of dredged or fill material into "...waters of the United States, including wetlands." Activities in wetlands for which permits may be required, if there are no feasible avoidance alternatives, include, but are not limited to: 1) placement of fill material 2) ditching activities when material is side cast 3) levee and dike construction 4) land clearing involving relocation of wetland soil material or removal of hydrophytic vegetation 5) land leveling 6) most road construction and 7) dam construction.

⁵ Section 102(2)(H) of NEPA requires that analyses will consider "ecological information" in planning and development of Federal actions. This requirement and ARs 200-1 and 200-3 require that analyses conducted pursuant to NEPA investigate potential effects to terrestrial, avian, and aquatic species and habitats.



- Pinelands Comprehensive Management Plan
- Sikes Act of 1960 (16 USC 670 *et seq.*)
- AR 200-1, Environmental Protection and Enhancement
- 32 CFR 651, Environmental Effects of Army Actions
- AR 200-3, Natural Resources - Land, Forest, and Wildlife Management
- AFI 32-7064, Integrated Natural Resources Management
- EO 11987, Exotic Organisms, 24 May 1977
- EO 11988, Floodplain Management, 24 May 1977
- EO 11990, Protection of Wetlands, 24 May 1977 ⁶
- EO 11991, Protection and Enhancement of Environmental Quality, 24 May 1977
- Pinelands Comprehensive Management Plan (N.J.S.A. 13:18A-1 *et seq.*, N.J.A.C. 7:50 *et seq.*).

Biological resources at the Site are managed according to these and other applicable environmental laws and regulations.

4.8.2 Local Ecosystems and Communities

4.8.2.1 Plant Communities

The proposed CLTF site is located within a mature Pine/Oak - Oak/Pine forest, with herbaceous-dominated open fields and successional vegetation. Plant species found within the region are common for climatic and hydrologic conditions of the Pine Barrens Natural Community. White oak and post oak are the most dominant tree species located within the project study area. Tree species native to this region may include: pitch pine; red cedar; scarlet oak; black-jack oak; sassafras; black cherry; American holly; red maple; and scrub, New Jersey, or Virginia pine (Gross 2004).

4.8.2.2 Special Habitat Area

The project study area is located within the Pinelands National Reserve, also referred to as the Pinelands. This reserve consists of approximately 1.1 million acres in southern New Jersey, managed by the New Jersey Pinelands Commission. The Pinelands National Reserve includes portions of seven counties, including: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Ocean. The Pinelands are one-third publicly owned and two-thirds privately owned (New Jersey Pinelands Commission 2004a).

4.8.3 Wildlife Resources

As previously mentioned, the proposed CLTF site is located within a mature Pine/Oak - Oak/Pine forest, with herbaceous-dominated open fields and successional vegetation. A variety of game and non-game wildlife species inhabit the project study area. In general, the New Jersey Pinelands support a diverse assemblage of 38 mammal species, 299 bird species, 59

⁶ EO 11990 provides guidance on wetland protection. This EO requires all Federal agencies to issue or amend existing procedures to ensure consideration of wetland protection in decision-making. It is the intent of this EO and EO 11988 (Floodplain Management) that Federal agencies implement these requirements through existing procedures, such as those established to implement NEPA. 32 CFR PART 651 provides guidance for protection of wetlands on ARNG properties as a subcomponent of the NEPA process.



reptile species, and 10,000 arthropod species. It is estimated that approximately 30 mammal species, 22 reptiles, and 144 bird species currently inhabit or utilize habitat within the project study area. No surface water is retained within either the CLTF site or the proposed tank trail; therefore, no aquatic life is present within the Site (ARH 2002). The proposed natural gas line crosses North Ruckles Branch and four tributaries to Middle Ruckles Branch; however, the proposed natural gas line would be installed down the middle of the existing South Boundary Road, and would be directionally trenched underneath wetlands and surface waters. Therefore, no aquatic species would be present.

4.8.4 Special Status Species

During ARH preparation of the preliminary EA, the USFWS, Division of Parks and Forestry Office of Natural Lands Management, and the Pinelands Commission were consulted to identify the potential presence of any listed or proposed threatened or endangered species within the project study area. Copies of the correspondence with these agencies are presented in **Appendix C**. Special status species identified in correspondence letter from the USFWS within the proposed CLTF site region are summarized in **Table 4-4**.

TABLE 4-4
Summary of Special Status Species Presently Recorded
in the Proposed CLTF Site Vicinity

Species	Common Name	Status	Within Lakehurst NAES	Within Alternative 3 Proposed Project Alternative
Reptiles				
<i>Pituophis melanoleucus melanoleucus</i>	Northern pine snake	SE	Yes	Yes
Birds				
<i>Ammodramus savannarum</i>	Grasshopper sparrow	ST	Yes	Unlikely
Plants				
<i>Rhynchospora knieskernii</i>	Knieskern's beaked-rush	FT	Possible	Unlikely

Source: USFWS 2001 (see **Appendix C**), WEC 2002a

Notes:

FT – Federally listed Threatened species

SE – New Jersey State Endangered species

ST – New Jersey State Threatened species

According to the USFWS, no federally listed threatened or endangered plant species are documented in the vicinity of the project study area (see **Appendix C**). However, the USFWS concludes that “potentially suitable habitat for the federally listed (threatened) plant, Knieskern's beaked-rush (*Rhynchospora knieskernii*) occurs on or in the vicinity of the proposed CLTF site” (USFWS 2001 [see **Appendix C**]). Knieskern's beaked-rush occurs in early successional wetland habitats, often on bog-iron substrate or mud deposits adjacent to slow-moving streams in the Pinelands region of New Jersey. This species is also found in human-disturbed wet areas including abandoned borrow pits, clay pits, ditches, rights-of-way, and unimproved roads. The



species is intolerant of shade and competition, and is generally found on relatively bare substrate with sparse vegetation (see **Appendix C**). The proposed CLTF site does not contain suitable habitat for the Knieskern's beaked-rush. As stated in the USFWS letter, dated 14 October 2005 (see **Appendix C**), "the Service concurs with your determination that wetlands are not present within the proposed CLTF; therefore, Knieskern's beaked-rush will not be adversely affected by the proposed project.:

The wetland areas located along the proposed natural gas line area consist of mature vegetation and shaded areas; therefore, potential suitable habitat for Knieskern's beaked-rush is unlikely to occur within the proposed natural gas line area. However, the proposed natural gas line would be installed down the middle of the existing South Boundary Road, and would be directionally trenched underneath wetlands and surface waters.

The NJDEP, Division of Fish, Game and Wildlife – Endangered Species and Non-Game Species Program, completed an initial rare species survey at the Lakehurst NAES in 1988. At that time, 35 rare species were identified at the installation. These species consisted of seven rare birds, two rare reptiles, one rare amphibian, 14 rare insects, and 11 rare plants. Suitable habitat for several unconfirmed species was also identified (ARH 2002). Although the rare species survey conducted at the Lakehurst NAES was comprehensive, additional survey work was necessary to update the 10-year-old survey.

According to the NJDEP survey, the only rare species confirmed within the vicinity of the project study area were the northern pine snake (*Pituophis m. melanoleucus*), the Pine Barrens tree frog (*Hyla andersonii*), and the grasshopper sparrow (*Ammodramus savannarum*). The northern pine snake was documented in 1988 along the southwest boundary, along Ocean County Route 539. A Pine Barrens tree frog specimen was documented in 1989, just east of Fire Pond #5, which is located outside the eastern boundary of the project study area (ARH 2002). Grasshopper sparrows were observed in 1999 within the project study areas interior grassy areas (Parsons 1999). A letter from the USFWS, dated 8 June 2001, supports the NJDEP and states that the northern pine snake has been documented adjacent to the project study area. This species is currently classified as state-endangered by the USFWS.

Wander Ecological Consultants (WEC), in coordination with the New Jersey Pinelands Commission and the Lakehurst NAES Natural Resource Staff, conducted an 8-month study from April to November 2001. The primary objective of the study was to identify the presence of and habitat for the northern pine snake, grasshopper sparrow, and sickle-leaved golden aster. Furthermore, the study focused on the identification of unique habitat features with regard to the provision of critical habitat for any floral/faunal species identified as "threatened" or "endangered" under current Federal and/or state regulations (ARH 2002).

No northern pine snake nest sites or hibernacula were discovered within the project study area by WEC; however, WEC did conclude that the Site provides foraging habitat for this species. Furthermore, the study concluded that the project study area does not provide the necessary white-sand habitat for the sickle-leaved golden aster. In addition, WEC concluded that the project study area provides minimal habitat for the grasshopper sparrow, and it is unlikely that the project study area would support more than one to two pairs of the species (WEC 2002a). Furthermore, based on reconnaissance surveys conducted, the project study area does not support habitat for the Knieskern's beaked-rush.



WEC conducted a trapping study, in May 2002, as per the request of the New Jersey Pinelands Commission. This study focused on the presence/absence of the northern pine snake within the project study area. The study also revealed that at least four northern pine snakes inhabit the project study area, and their activity, at least in spring, is concentrated near the foundation in the northeastern corner of the western field (WEC 2002b).

4.9 Cultural Resources

4.9.1 Regulatory Framework

4.9.1.1 Definition of Cultural Resources

Cultural resources are prehistoric and historic sites, structures, districts, or any other physical evidence of human activity considered important to a culture, subculture, or a community for scientific, traditional, and/or religious reasons (36 CFR 64). For the purposes of this EA, based on statutory requirements, the term cultural resources is defined to include:

- Historic properties, as defined in the National Historic Preservation Act (NHPA) of 1966, as amended
- Cultural items, as defined in the NAGPRA
- Archaeological resources, as defined in the Archeological Resources Protection Act (ARPA)
- Historic and paleontological resources, as defined by the Antiquities Act of 1906, as amended
- Sites that are scientifically significant, as defined by the Archeological and Historic Data Preservation Act (AHPA)
- Sacred sites, as defined in EO 13007, to which access and use is permitted under the American Indian Religious Freedom Act (AIRFA)
- Collections, as defined in 36 CFR 79, Curation of Federally Owned and Administered Collections.

In brief, cultural resources include archaeological, architectural, and traditional resources:

- **Archaeological resources** consist of locations where prehistoric or historic activity measurably altered the earth or produced deposits of physical remains, such as arrowheads and bottles.
- **Architectural resources** include standing buildings, districts, bridges, dams, and other structures of historic or aesthetic significance. Architectural resources generally must be more than 50 years old to be considered for inclusion in the National Register of Historic Places (NRHP), an inventory of culturally significant resources identified in the U.S. However, more recent structures, such as Cold War-era resources, may warrant protection if they have the potential to gain significance in the future.
- **Traditional resources** include locations of historic occupations and events, historic and contemporary sacred and ceremonial areas, prominent topographical areas,



traditional hunting and gathering areas, and other resources that Native Americans or other groups consider essential for the survival of their traditional culture.

4.9.1.2 Overview of Applicable Regulations

NEPA and 32 CFR 651 require that ARNG proponents ensure that cultural resources, as defined by the above-stated regulations, are fully considered when preparing NEPA analyses. The primary regulatory driver for cultural resources protection, restoration, rehabilitation, and/or reconstruction by the ARNG is the NHPA (16 USC 470), as well as AR 200-4, the ARNG's interpretation and application of the NHPA.

The NHPA establishes the Federal government's policy to provide leadership in the preservation and management of historic properties. Under Section 106 of the NHPA and 36 CFR 800, Federal agencies are required to both identify and protect historic properties included in, or eligible for listing on, the NRHP. Historic properties may be archaeological sites (both prehistoric and historic), buildings, structures, objects, or districts. The Federal proponent is responsible for seeking the comments of the Advisory Council on Historic Preservation (ACHP) under 36 CFR 800 on projects that affect historic properties. In the State of New Jersey, all Federal projects are reviewed by the NJDEP Deputy State Historic Preservation Officer in accordance with Section 106 of the NHPA and by the ACHP in accordance with 36 CFR 800. In addition, Section 110 of the NHPA, as well as AR 200-4, impose specific responsibilities on Federal agencies regarding historic preservation, including requiring an historic preservation program (i.e., an ICRMP) to include the identification, evaluation, and nomination of historic properties to the NRHP in consultation with the ACHP, NJDEP Deputy State Historic Preservation Officer, local governments, and other interested parties.

The NAGPRA requires installation commanders to summarize, inventory, and repatriate cultural items in the possession or control of the installation to appropriate, lineal descendants, or to federally recognized affiliated tribes to the extent possible and practicable.

The Antiquities Act of 1906 and the ARPA prohibit the excavation, collection, removal, and disturbance of archaeological resources (as defined by ARPA) and objects of antiquity (as defined in the Antiquities Act) on federally owned NGB property, unless permission is granted by the U.S. Army Corps of Engineers (USACE) District Real Estate Office or by the installation commander.

The AHPA provides for the survey and recovery of scientifically significant data that might be lost as a result of terrain alteration associated with any Federal action. The AHPA requires incorporation of an installation paleontological resource management program into the ICRMP, including policy for limiting the collection and removal of paleontological resources.

Applicable statutes, regulations, and EOs affording protection to cultural resources that occur at the Lakehurst NAES include the following:

- ACHP, Protection of Historic and Cultural Properties (36 CFR 800)
- AIRFA of 1978 (P.L. 95-341; 42 USC 1996)
- Antiquities Act of 1906 (P.L. 59-209)
- AHPA of 1974 (P.L. 93-291; 16 USC 469-469c)



- ARPA of 1979 (P.L. 96-95; 16 USC 470aa-47011)
- 32 CFR 651, Environmental Effects of Army Actions
- AR 200-4/420-40, Cultural Resources Management
- Department of the Army Pamphlet (DA PAM) 200-4, Cultural Resources Management
- NEPA of 1969 (P.L. 91-190; 42 USC 4321 *et seq.*)
- NHPA of 1966 (P.L. 95-515; P.L. 102-575; 16 USC 470)
- NAGPRA of 1990 (P.L. 101-601; 25 USC 3001-3013; *as implemented by* 43 CFR 10)
- EO 13007, Indian Sacred Sites, 24 May 1996
- New Jersey Register of Historic Places (N.J.A.C. 7:4)
- Pinelands Comprehensive Management Plan (N.J.S.A. 13:18A-1 *et seq.*, N.J.A.C. 7:50 *et seq.*)

4.9.1.3 Significance Criteria

In order for a cultural resource to be considered significant, it must meet one criterion or more for inclusion on the NRHP, as described below:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association; and: a) that are associated with events that have made a significant contribution to the broad patterns of our history; or b) that are associated with the lives or persons significant in our past; or c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Only significant cultural resources warrant consideration with regard to adverse impacts resulting from implementation of a Proposed Action. Generally, cultural resources must be more than 50 years old to receive protection under Federal laws.

4.9.2 Cultural Resources Consultations

As part of the preliminary EA process, the NJARNG contacted the NJDEP Deputy State Historic Preservation Officer to obtain information regarding known cultural resources sites at or in the vicinity of the Lakehurst NAES. A copy of this correspondence is included in **Appendix C**. According to the NJDEP Deputy State Historic Preservation Officer, the Proposed Action would have no effect on resources on, or eligible for inclusion in, the NRHP.

In addition, no Native American Traditional Cultural Properties (TCPs), protected tribal resources, tribal rights, sacred tribal sites, or Indian land are known to be present within the Preferred Alternative project site (Alternative 3). According to the Lakehurst NAES Cultural Resources Manager, this area is classified as Low and Disturbed on the NAES Archeological Sensitivity Map (see **Appendix C**).



4.10 Socioeconomics

The following subsections identify and describe the socioeconomic environment in Jackson Township, New Jersey and the surrounding areas. The data presented provide an understanding of the socioeconomic factors that have developed the area. Socioeconomic areas of discussion include the local demographics of the area, regional economy, local housing, and local recreation activities. Data used in preparing this section was collected from the 2000 Census of Population and Housing, and the Jackson Township Chamber of Commerce.

4.10.1 Demographics

The 2000 census measured populations for the State of New Jersey, Ocean County, and Jackson Township. New Jersey and Ocean County have both reported an increase in population compared with 1990 census records. The state experienced an increase from 7,730,188 persons to 8,414,350 persons (8.9 percent), and the county experienced an increase from 433,203 persons to 510,916 persons (17.9 percent). Jackson Township has increased in population by 28.8 percent (an increase from 33,233 persons to 42,816 persons). Projected census data through 2025 anticipate an increase in population for the State of New Jersey to over 9 million (11.3 percent). Additionally, projected census data through 2025 anticipate an increase in population for Ocean County, New Jersey to approximately 732,000 (30.2 percent). Projections for Jackson Township were not available (see **Table 4-5**).

TABLE 4-5
Regional Population Projections for Areas Peripheral to the Project Study Area in
Jackson Township, Ocean County, New Jersey

Area	1990	2000	2005	2015	2025	Change 1990-2000 (%)	Projected Change 2000-2025 (%)
State of New Jersey	7,730,188	8,414,350	8,387,000	8,832,000	9,369,000	8.9	11.3
Ocean County	433,203	510,916	578,600 ¹	640,400	731,900	17.9	30.2
Jackson Township	33,233	42,816	N/A	N/A	N/A	28.8	N/A

Sources: Census 2000a – Census 2000g, NJLWD 2005

Notes:

1. This figure is projected for the year 2007.

N/A = Data not available

4.10.2 Regional Economy

Currently, the Lakehurst NAES employs a combined workforce of 3,500 military, civilian, and contractor personnel. These employees consist primarily of engineers, technicians, logisticians, acquisition experts and support specialists. In addition, the Lakehurst NAES supports over 500



military dependants. The Lakehurst NAES is Ocean County's largest employer, and is ranked among the top 60 employers in the State of New Jersey (NAVAIR Lakehurst 2004).

Table 4-6 displays employment level by industry in the State of New Jersey, Ocean County, and Jackson Township. Educational, Health, and Social Services, as well as Trade, are the largest industries in New Jersey, Ocean County, and Jackson Township, which, combined, compose over 35 percent of the workforce.

TABLE 4-6
Employment Levels by Industry for Areas Peripheral to the Project Study Area in
Jackson Township, Ocean County, New Jersey (2000)

Industry	State of New Jersey	Ocean County	Jackson Township
Agriculture and Mining	0.3%	0.4%	0.6%
Construction	5.6%	8.7%	8.4%
Manufacturing	12.0%	7.8%	10.7%
Trade	15.7%	17.9%	16.5%
Transportation	5.9%	6.2%	7.3%
Information	4.4%	3.4%	4.3%
Finance, Insurance, Real Estate	8.9%	6.6%	7.6%
Educational, Health, and Social Services	19.8%	22.3%	18.8%
Public Administration	4.5%	5.8%	5.6%
Other	22.8%	20.8%	20.1%

Sources: Census 2000b – Census 2000d

4.10.3 Proposed CLTF Economy

The Proposed CLTF Phase 1 is estimated to employ approximately 80 full-time NJARNG personnel, potentially increasing to approximately 100 Army National Guard personnel on weekends. Upon completion of the CLTF Phase 2, the total estimate of full-time NJARNG employees is 50, with the potential of increasing to approximately 100 ARNG personnel on weekends⁷. Upon completion of the CLTF Phase 3, the total estimate of full-time NJARNG employees is 25, with the potential of increasing to approximately 200 ARNG personnel on weekends.

4.10.4 Housing

The State of New Jersey and Ocean County have both seen an increase in the number of housing units in recent years due to the increase in population (see **Table 4-7**). According to housing statistics from the 2000 U.S. Census, New Jersey has a 92.6 percent occupied rate of the 3,310,275 available housing units. Ocean County has a significantly lower occupied

⁷ Training activities are not performed during unfavorable conditions; therefore, the proposed facilities would not be used every weekend.



housing unit rate at 80.6 percent due to seasonal homes. Jackson Township is within 5 percent of the state average for occupied housing. Jackson Township has a lower percentage of renter-occupied units compared with the rest of the state and the county, with over 87 percent of the housing units being owner occupied. The median value of a home in Jackson Township (\$156,300) is similar in comparison to the rest of the state (\$170,800). The median value of a home in Ocean County (\$131,300) is slightly lower than that of Jackson Township and the State of New Jersey.

TABLE 4-7
Selected Housing Characteristics for Areas Peripheral to the Project Study Area in Jackson Township, Ocean County, New Jersey (2000)

Area	Housing Units Available	Occupied (%)	Owner - Occupied (%)	Median Value*	Renter - Occupied (%)	Median Contract Rent
State of New Jersey	3,310,275	92.6	65.6	\$170,800	34.4	\$751
Ocean County	248,711	80.6	83.2	\$131,300	16.8	\$819
Jackson Township	14,640	96.8	87.1	\$156,300	12.9	\$863

Sources: Census 2000b – Census 2000d

4.10.5 Schools

Public schools located in Jackson Township are managed under the Jackson School District. The Jackson School District carries an enrollment of over 9,000 students in grades K through 12, with six elementary schools (grades K-5), two middle schools (grades 6-8), and one high school (grades 9-12). No Jackson Township public schools are located within close proximity (1 to 2 miles) to the proposed CLTF site (Jackson School District 2004). However, two schools, in nearby Manchester Township, are located within 7 miles of the proposed CLTF site: Lakehurst Elementary School and Manchester Township High School. No post secondary schools are located in Jackson Township.

The relative educational attainment of persons 25 years of age and older in 2000 for the state, county, and local communities is provided in **Table 4-8**. The educational attainment for Jackson Township and Ocean County are similar in comparison with the rest of the State.

TABLE 4-8
Educational Attainment of Persons 25 Years and Older in 2000 for Areas Peripheral to the Project Study Area

Area	High School Graduates* (%)	Post-Secondary Graduates (%)	Sub 9 th Grade Attainment (%)
State of New Jersey	82.1	29.8	6.6
Ocean County	83.0	19.5	4.5
Jackson Township	86.9	23.1	3.6

Sources: Census 2000b – Census 2000d

*Includes equivalency



4.10.6 Shops and Services

No shops or services are currently present within the project study area and none are planned at this time. Retailers in local communities provide local shopping for area residents. Small business retail shops are located within approximately 1 to 2 miles of the Lakehurst NAES. Larger retailers are located in nearby Toms River, approximately 3 miles from Lakehurst NAES along Route 37.

4.10.7 Recreational Facilities

Numerous recreational pursuits are available in Jackson Township, which is home to Six Flags Great Adventure, Six Flags Wild Safari, and Hurricane Harbor, as well as to various camping facilities and shopping outlets. Jackson Township also lends itself to a full range of outdoor recreational activities, such as hunting, biking, and running.

Located within the center of New Jersey, Jackson Township is within a 1-hour distance of various tourism destinations, including Atlantic City, Point Pleasant Beach, and Seaside Heights.

4.10.8 Public and Occupational Health and Safety

4.10.8.1 Training Safety

The Lakehurst NAES and Fort Dix, as well as maintenance and support facilities operated by the NJARNG, conduct activities in accordance with established Federal/state occupational health and safety regulations. The proposed learning sites associated with each of the four proposed components comprising the CLTF would provide training in occupational safety for its employees.

4.10.8.2 Explosives Materials Safety

No explosive materials are currently stored or utilized at the project study area.

4.10.8.3 Police and Fire Protection

If an emergency requiring police protection occurs, the Lakehurst NAES is connected to the 911 Emergency System. The Jackson Township Police Department, located approximately 8 miles north of the Lakehurst NAES, and the DoD Police Force, located within the Lakehurst NAES, both provide police protection. The Navy Lakehurst Fire and Emergency Services Division, located on-site, provides fire protection for the Lakehurst NAES.

4.10.8.4 Medical Facilities

If a medical emergency occurs, medical facilities that the military operates are available on the Lakehurst NAES, Fort Dix, and on the McGuire Air Force Base. Civilian medical facilities within close proximity to the proposed CLTF site include the Community Medical Center located in Toms River, New Jersey on State Route 37 and the Garden State Parkway, approximately 10 miles east of the project study area.



4.10.8.5 Protection of Children

Because children suffer disproportionately from environmental health and safety risks, EO 13045, Protection of Children from Environmental Health Risks and Safety Risks, was introduced on 21 April 1997. EO 13045 was intended to (1) prioritize the identification and assessment of environmental health and safety risks that may affect children and to (2) ensure that Federal agency policies, programs, activities, and standards address environmental and safety risks to children. This subsection identifies the distribution of children and locations in which numbers of children may be proportionately high (e.g., schools, child care centers, and family housing) in Jackson Township and in the surrounding Ocean County.

Table 4-9 examines the population under the age of 18 for Jackson Township and its surroundings. The population under the age of 18 is similar for Jackson Township (29.7 percent), Ocean County (23.3 percent), and the State of New Jersey (24.8 percent).

TABLE 4-9
Total Population Versus Population Under Age 18 for Areas Peripheral to the Project
Study Area in Jackson Township, Ocean County, New Jersey (2000)

Area	Total Population	Population Under 18	% Population Under 18
State of New Jersey	8,414,350	2,087,558	24.8%
Ocean County	510,916	119,046	23.3%
Jackson Township	42,816	12,702	29.7%

Sources: Census 2000b – Census 2000d

According to the Jackson Township Chamber of Commerce, nine schools are located within Jackson Township and its surrounding area. None of these nine schools are located within close proximity (1 to 2 miles) of the proposed CLTF site (Jackson School District 2004). However, two schools in nearby Manchester Township are located within 7 miles of the proposed CLTF site. Lakehurst Elementary School is located at 301 Union Avenue. Approximately 474 students attend this school, ranging in grades from pre-kindergarten to 8th grade. Manchester Township High School is located at 101 South Colonial Drive. Approximately 1,110 students attend this school, ranging in grades from 9th grade to 12th grade (Manchester Township 2004). No children are regularly present at the project study area.

4.11 Environmental Justice

4.11.1 Regulatory Framework

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, dated 11 February 1994, was issued to focus the attention of Federal agencies on human health and environmental conditions in minority and low-income communities, and to ensure that potential disproportionately high and adverse human health or environmental effects on these communities are identified and addressed. In order to provide a thorough environmental justice evaluation, this section describes the distribution of race and



poverty status in areas surrounding the project study area and in those potentially affected by implementation of the Proposed Action.

4.11.2 Geographic Distribution of Minorities

Table 4-10 presents the ethnic characteristics of the region's population from the 2000 U.S. Census. The majority of residents in the State of New Jersey are white (66.0 percent). Ocean County (10.1 percent) and Jackson Township (12.8 percent) each have similar amounts of minority residents. However, the State of New Jersey overall has a significantly higher percentage of minority population (34.0 percent). Ocean County's population is 3.0 percent African American and 5.0 percent Hispanic. Jackson Township has a similar racial relationship to Ocean County, and is composed of 3.9 percent African Americans and 5.8 percent Hispanic. The State of New Jersey has a significantly higher minority population, which is composed of 13.6 percent African Americans and 13.3 percent Hispanic.

TABLE 4-10
Percentage of Regional Population by Race for Areas Peripheral to the Project Study
Area in Jackson Township, Ocean County, New Jersey (2000)

Area	White	African American	American Indian, Eskimo, or Aleut	Asian or Pacific Islander	Hispanic Origin	Other Race
State of New Jersey	66.0	13.6	0.2	5.7	13.3	1.2
Ocean County	89.9	3.0	0.1	1.3	5.0	0.7
Jackson Township	87.2	3.9	0.1	2.1	5.8	0.9

Sources: Census 2000b – Census 2000d

4.11.3 Geographic Distribution of Low-Income Populations

Median household incomes and poverty levels from the 2000 U.S. census are presented in **Table 4-11**. Ocean County's median household income (\$46,443) is slightly under the state average of \$55,146. Jackson Township has a significantly higher income at approximately \$62,218 per household. This higher income level is reflected by the 3.7 percent of the residents in Jackson that are at or below the poverty level. This level is significantly lower than the state average of 8.5 percent. Ocean County's poverty level, at 7.0 percent, is slightly lower than the state average.

4.11.4 Consumption Patterns

Based on socioeconomic data consulted and referenced in the above sections, no identifiable populations or local groups in the vicinity of the project study area currently rely solely on fish or wildlife for subsistence. Of the multiple personnel interviewed to gather data for preparation of this EA, none identified any local population segments that meet these criteria.



TABLE 4-11
Income and Poverty Statistics of Regional Population for Areas Peripheral to the Project
Study Area in Jackson Township, Ocean County, New Jersey

Area	Total Population (2000)	Median Household Income (2000)	Total Number of Persons at or Below Poverty Level (ABPL) (2000)	Total Percent ABPL (2000)
State of New Jersey	8,414,350	\$55,146	699,668	8.5%
Ocean County	510,916	\$46,443	34,945	7.0%
Jackson Township	42,816	\$62,218	1,573	3.7%

Sources: Census 2000b – Census 2000d

4.12 Infrastructure

4.12.1 Potable Water Supply

No potable wells are currently located within the project study area. It is anticipated that a single 50 gallons per minute (gpm) well at a depth of 200 feet below grade will be sufficient based on projected full-time staff levels and ancillary water use to accommodate the initial two project phases. The well would be installed into the Cohansey Sand Aquifer, extracting less than 2,000 gallons per day (gpd). Total maximum well water consumption for all four phases is estimated to be 4.5 million gallons per year (mgpy).

One 150,000-gallon water storage tank would be located within the project study area. This tank would be located at-grade and will support potable, sanitary, and emergency fire suppression system requirements.

4.12.2 Wastewater Treatment

No wastewater treatment is currently provided at the project study area. Current facilities at the Lakehurst NAES are connected to the Ocean County Utility Authority.

The project study area was once equipped with its own septic system when it was an active satellite communication facility. It is unknown whether or not the septic tank was properly abandoned during demolition of the associated structures in 1995. Due to the remote nature of the Proposed CLTF, the distance, and the costs associated with connection to the centralized collection system at the Lakehurst NAES, it is anticipated that an on-site collection and disposal system for sanitary wastewater would be provided at the proposed CLTF site. This system pro-actively addresses both the Pinelands Commission prohibition against inter-basin transfer of water and recently promulgated NJDEP Watershed Management regulations, which encourage groundwater discharge for maintenance of regional stream flows (ARH 2002).

4.12.3 Solid Waste Disposal

No solid waste disposal is currently provided at the project study area. However, the NAES utilizes the Ocean County Landfill in Manchester for non-recyclable waste.



4.12.4 Energy Sources

4.12.4.1 Electricity

No electricity is currently provided at the project study area. However, GPU Energy provides electricity to the Lakehurst NAES. Electrical lines are located on the southwestern boundary of the project study area along Ocean County Route 539.

4.12.4.2 Fossil Fuels

Fossil fuels are not currently located within the project study area. However, the New Jersey Natural Gas Company in Wall, New Jersey provides natural gas to the Lakehurst NAES. The utility owns and maintains all existing gas mains within the installation.

The Proposed Action would extend the existing natural gas line, currently supplying Lakehurst NAES, along South Boundary Road toward the project study area. The proposed gas line would extend approximately 3 miles southeast along the middle of the existing South Boundary Road and approximately 0.5 miles northwest to the project study area.

4.12.5 Telecommunications

No telephone service is currently provided to the project study area.

4.12.6 Transportation

4.12.6.1 Local Roadways

Ocean County Route 539 borders the project study area on the southeast. Additional roadways in the vicinity of the project study area include Ocean County Route 528, New Jersey Route 70, and Horicon Road.

Ocean County Route 539 provides access to the proposed CLTF site. Ocean County Route 539 is classified as a rural, major collector roadway, connecting New Jersey Route 70 to Interstate 195. Ocean County Route 539 is a 2-lane road, with travel in each direction and a variable width of 28 feet to 35 feet.

A Traffic Impact Study was prepared by Orth-Rodgers & Associates, Inc. (ORA) to assess the traffic impacts of the proposed CLTF on the local roadways. The study included background traffic growth rate and capacity analysis, utilizing the New Jersey Department of Transportation (NJDOT) growth rate table. During the analysis, ORA contacted adjacent municipalities to identify potential future developments which may impact the project study area. Furthermore, The study assessed the Level of Service, a descriptive concept developed for non-signal intersections. Level of Service relates expected traffic delay to critical movement. Non-signal levels of service range from Level of Service 'a' (indicating average delays of 10 seconds or less) to Level of Service 'f' (indicating average delays of greater than 50 seconds) (ORA 2001).

The proposed tank trail, for travel by various military tactical and non-tactical vehicles between the proposed CLTF and the military training ranges at Fort Dix, will cross over Ocean County



Route 539. The location of the proposed tank trail would allow for approximately 0.25 mile of visibility in either direction on Ocean County Route 539 (see **Figure 2-1b**).

4.12.6.2 Passenger and Freight Rail Access and Service

A railhead connection is currently located at the eastern portion of the Lakehurst NAES to accommodate contaminated soil from the U.S. Air Force Boeing Michigan Aeronautical Research Center (BOMARC) missile site, located approximately 2 miles north of the proposed CLTF site. The connection accommodates soil transport from this clean-up operation, but could remain operational, substantively enhancing force mobility for the Lakehurst NAES, the NJARNG, and Army operations at Fort Dix.

4.13 Hazardous and Toxic Materials

4.13.1 Regulatory Framework

The Comprehensive Environmental, Response, Compensation, and Liability Act (CERCLA); the Resource Conservation and Recovery Act (RCRA); AR 200-1; and 32 CFR 651 are the primary regulations that govern ARNG hazardous material use, handling, and remediation at military installations. In general terms:

- **CERCLA** – Regulates the cleanup of releases or threats of releases of hazardous substances, pollutants, and contaminants
- **RCRA** – Regulates management of hazardous waste, including storage, handling, transportation, treatment, and disposal
- **AR 200-1** – *Environmental Protection and Enhancement* defines Army policy and procedures for managing solid and hazardous waste, including resource recovery, recycling, waste reduction, and training programs
- **32 CFR 651** – *Environmental Analysis of Army Actions* (AR 200-2) defines Army policy and responsibilities for early integration of environmental considerations into planning and decision-making.

4.13.2 Hazardous Materials and Waste Management Plans

During the preparation of the preliminary EA, ARH utilized EcoSearch Environmental Records, Inc. (EcoSearch) as an information source for environmental database records. EcoSearch does not report the project study area as an environmentally regulated or known/suspected contaminated property. **Table 4-12** summarizes the results of EcoSearch's database search.

EcoSearch identified and mapped 70 sites of potential environmental concern located within Jackson Township, Manchester Township, and Plumstead Township. However, due to the location of the identified sites, potential contaminant issues, and groundwater flow characteristics, it is anticipated that the identified sites would have no impact on the project study area. **Table 4-13** summarizes the identified sites' approximate distance and anticipated impact to the project study area.



TABLE 4-12
Environmental Database Summary

Sites Searched	Target Property	Within 1/8 mile	Within 1/8 to 1/4 mile	1/4 to 1/2 mile	1/2 to 1 mile
NPL	No	0	0	0	0
CORRACTS	No	0	0	0	0
SHWS (KCSL)	No	0	0	0	0
DOCKET	No	0	0	0	0
LUSTIN	No	0	0	0	0
SPILLS	No	0	0	0	0
NJPDES	No	0	0	0	0
PWS	No	0	0	0	0
CERCLA	No	0	0	0	N/A
RCRA-TSD	No	0	0	0	N/A
SWF	No	0	0	0	N/A
LUST	No	0	0	0	N/A
CERCLA-NFRAP	No	0	0	N/A	N/A
RCRA Generator	No	0	0	N/A	N/A
LUSTC	No	0	0	N/A	N/A
UST	No	0	0	N/A	N/A
ERNS	No	N/A	N/A	N/A	N/A
PADS	No	N/A	N/A	N/A	N/A
TRI	No	N/A	N/A	N/A	N/A
TSCA	No	N/A	N/A	N/A	N/A
SSTS	No	N/A	N/A	N/A	N/A

Source: EcoSearch 2001

N/A – Data not available

TABLE 4-13
Identified Site Summary

Site	Type	Distance	Anticipated Impact
NAES Abandoned Pistol Range	N/A	500 feet north	None
Manchester Township Landfill	NJPDES	1.5 miles southeast	None
Charter Lakehurst (Behavioral) Health Systems	NJPDES	1.7 miles southeast	None
BOMARC	N/A	1.9 miles northwest	None
Spiniello Construction	NJPDES	2.0 miles northwest	None
Lakehurst NAES	NPL	>2.5 miles west	None
U.S. Army Training Center - Fort Dix	RCRA	> 2.5 miles northeast	None

Source: ARH 2002

N/A – Data not available



4.13.3 On-Site Storage Tanks

AMEC Earth & Environmental, Inc. (AMEC) has observed no documentation of evidence indicating that petroleum storage tanks are located within the project study area. However, ARH personnel have reviewed portions of the SATCOM demolition plans, which indicate the removal of one 4-foot by 16-foot propane tank but do not indicate any tanks containing petroleum products (ARH 2002). According to NAES Environmental Department personnel, two secondary containment fuel storage tanks were located on-site when the SATCOM facility was in operation; these storage tanks were removed and are no longer present on-site (Kon 2005). **Section 1.1** provides additional information regarding the SATCOM facility.

4.13.4 Past Spills and Leaks

AMEC observed no documentation of evidence indicating that any spills or leaks occurred within the project study area.

4.13.5 Spill Prevention, Control, and Countermeasures (SPCC) Plan

The purpose of the SPCC Plan is to:

- Prevent accidental discharge of Petroleum, Oil, or Lubricants (POL) into surface waters
- Identify potential spill sites and management/mitigation requirements
- Identify necessary actions applicable to potential spill sites in order to fulfill management/mitigation requirements.

In the operation and maintenance of equipment, management instructs oil-handling personnel to prevent discharges, follow discharge procedure protocols and general facility operations, and understand NAES SPCC Plan contents. New employees are trained in SPCC within two weeks of starting work, and management provides yearly spill prevention briefings. During training, personnel must be familiar with the actions that should be taken in the event of a fuel spill. Any individual observing a spill is to utilize the NAES Spill Response Hotline. Instructions and phone numbers for reporting a spill to both the National Response Center and the state are posted in the NAES environmental office (NAES SPCC Plan 2003).

4.13.6 On-Site Environmental Concerns Within the Proposed CLTF Site

No on-site environmental concerns pertain to hazardous and toxic materials/waste within the project study area.

4.13.7 Previous Site Investigations

In December 2002, ARH prepared a preliminary EA (ARH 2002). During this time, ARH consulted the USFWS and the Pinelands Commission to identify the potential presence of any listed or proposed threatened or endangered species within the project study area. ARH also contracted the services of WEC to perform various studies to identify the presence of, or habitat for, several state-listed threatened or endangered species.



4.13.7.1 Remedial Investigation and Feasibility Study (RI/FS)

AMEC personnel are not aware of a RI/FS for the proposed CLTF site.

4.13.7.2 Environmental Baseline Survey (EBS)

In June 2003, Parsons Engineering Science, Inc. prepared an EBS for the NJARNG and the NJDMAVA. This EBS concluded that no evidence indicated that hazardous substance activity took place on the proposed CLTF site. Parsons Engineering Science, Inc. also concluded that no areas of environmental concern were found within the project study area. The EBS did, however, identify the BOMARC missile site as an area of environmental concern in association with the proposed CLTF site. Lakehurst NAES personnel stated that no active spill sites exist at the proposed CLTF site (Parsons 2000).

4.13.8 Regional Environmental Concerns

The following have been identified as areas of environmental concern:

1. The proposed CLTF site is located approximately 500 feet south of an abandoned pistol range. The pistol range was reportedly taken out of commission in 1995. Following closure, environmental remediation procedures began. According to Lakehurst NAES personnel, extensive soil testing was performed within the pistol range area. The data indicated that lead contamination was limited to the first foot of soil. The contaminated soil was excavated and processed as part of the range closure procedures. Groundwater was not tested as part of the pistol range closure; however, base-wide water screening has not identified lead as a contaminant of concern (ARH 2002).
2. The BOMARC site is located approximately 2 miles north of the project study area. Cleanup of the BOMARC site has been ongoing for the past 2 years. Plutonium-contaminated soils were removed from the Site in sealed containers via truck and were then loaded onto rail cars on the Lakehurst NAES for transfer to a disposal site. Most of the plutonium traces were less than 2,000 Pico curies per gram, allowing the bulk of the excavated dirt to be classed low-level radioactive waste (ARH 2002).

In addition to the plutonium-contaminated soil, a plume of chemical degreaser, trichloroethylene (TCE), leads from a storm drain at the BOMARC missile site; however, the identified plume is moving away from the project study area, northeast towards the Colliers Mills Wildlife Management Area. Monitoring wells were installed in 2002.

Additional information regarding potential environmental concerns pertaining to groundwater contamination is reported in **Section 4.7.4** in **Table 4-3**. **Table 4-3** displays the contaminant/water quality parameters detected above clean-up standards in the monitoring wells installed within the project study area.



5.0 Environmental Consequences

5.1 General Overview

This section identifies potential direct and indirect effects of the identified alternatives on each of the issue areas presented in **Section 4.0**, and compares and contrasts potential effects of alternatives. The potential environmental, cultural, and socioeconomic effects of implementing each of the alternatives are identified, as well as management/mitigation measures associated with each, when implemented, would reduce the level of identified impacts to the maximum extent possible.

5.1.1 Definition of Key Terms

The following paragraphs define key terms used throughout this section.

5.1.2 Direct Versus Indirect Impacts

The terms **impact** and effect are used synonymously in this EA. Impacts may be determined to be beneficial or adverse, and may apply to the full range of natural, aesthetic, historic, cultural, and economic resources of the project study area and its environment. Definitions and examples of direct and indirect impacts are used in this EA as follows:

- **Direct Impact:** A direct impact is caused by the Proposed Action, and occurs at the same time and place as the Proposed Action.
- **Indirect Impact:** An indirect impact is caused by the Proposed Action and occurs later in time, or is farther removed in distance but is still reasonably foreseeable. Indirect impacts may include induced changes in land use pattern, population density, or growth rate, and related effects on air, water, and other natural and social systems.
- **Application of Direct Versus Indirect Impacts:** For direct impacts to occur, a resource must be present in a particular study area. For example, if vegetation resources were disturbed in a particular area, a direct impact to wildlife would occur as a result of displacement from available habitat. This displacement from habitat would indirectly affect habitat in adjacent areas by increasing the wildlife population in those areas.

5.1.3 Short-Term Versus Long-Term Impacts

In addition to indicating if impacts are direct or indirect, this EA differentiates between short- and long-term impacts, where appropriate. In this context, short- and long-term do not refer to any rigid time period and are determined on a case-by-case basis in terms of anticipated consequences of the Proposed Action.



5.1.4 Cumulative Impacts

As described in **Section 2.0**, the NJARNG proposes alterations to the project study area to provide a multi-functional logistics and training support facility to help ensure the NJARNG's military readiness. **Sections 5.2** through **5.12** identify potential direct and indirect, short-term and long-term impacts associated with proposed actions under each of the specific project alternatives as identified in **Section 3.0**. **Section 5.15** evaluates the cumulative impact of these proposed actions at the proposed CLTF site combined with known existing, potential, or anticipated impacts associated with other local or regional activities currently being undertaken or anticipated by other landowners and decision-making authorities.

5.1.5 Significance Criteria

The term *significance* as used in NEPA requires consideration of both the context and intensity of the impact or effect under consideration. Significance can vary in relation to the context of the Proposed Action. For this Proposed Action, context may include consideration of effects on a national, regional, and/or local basis. Both short- and long-term effects may be relevant. Impacts are also evaluated in terms of their intensity. Factors contributing to the intensity of an impact include:

- The degree to which the action affects public health or safety
- The proximity of the action to resources that are legally protected by various statutes, such as wetlands; resources listed in, or eligible for, the NHRP; regulatory floodplains; and federally listed threatened or endangered species
- The degree to which the effects of the action on the quality of the human environment are likely to be highly uncertain or controversial
- Whether or not the action is related to other actions with individually insignificant but cumulatively significant impacts
- Whether or not the action threatens to violate Federal, state, or local law imposed for the protection of the environment.

5.1.6 Management/Mitigation

Management/mitigation measures are discussed for each alternative, as appropriate. Where significant adverse impacts are identified, this document describes measures that will be used to mitigate and/or manage these effects to acceptable levels, where possible. Management/mitigation measures generally include:

- Avoiding the impact altogether by stopping or modifying the Proposed Action
- Minimizing the impact by limiting the degree or magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment



- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, such as implementation of appropriate and accepted Best Management Practices (BMPs)
- Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation and/or management of adverse impacts associated with alterations to the project study area are generally the responsibility of the NJARNG. Summaries of management/mitigation commitments are included in **Section 5.13** of this document. The management/mitigation measures taken to reduce or avoid the selected alternative's adverse environmental effects are included in the FONSI that will be prepared after a public review and a comment period are completed for the Draft EA (i.e., if the Draft EA determines that an EIS is not required). The FONSI will be included as an attachment to the Final EA. Only those management/mitigation measures that are practicable (i.e., can be accomplished as part of the primary action) have been identified.

5.2 Land Use

5.2.1 Effects of Alternative 3 (Preferred Alternative)

No impact on the general land use of the area would be anticipated due to implementation of Alternative 3. Land use in the project study area is characteristic of the region, consisting primarily of military uses.

5.2.2 Effects of Alternative 5 (No-Action Alternative)

No impact to current land use at the Lakehurst NAES would be anticipated due to implementation of Alternative 5.

5.2.3 Management/Mitigation Measures (Alternative 3)

No management/mitigation measures are required.

5.3 Air Quality

5.3.1 Effects of Alternative 3 (Preferred Alternative)

Under Alternative 3, when compared with existing conditions, air emissions associated with proposed construction activities and personnel increases are expected to increase slightly in the future; however, significant adverse air quality impacts would not be anticipated due to these activities. Short-term direct impacts to air quality would result from construction of the proposed CLTF (see **Appendix F**).

Fugitive dust from on-site construction activities and mobile source emissions from construction vehicles, equipment, and the motor vehicles of construction workers are expected. Project construction would involve earth movement, grading and other typical construction activities.



Exhaust emissions from construction vehicles, soil erosion, and fugitive dust are all construction issues that would affect air quality (see **Appendix F**).

Based on the analysis provided in **Appendix F**, the Proposed Action is expected to have total emissions well below the de minimus threshold levels; therefore, the Record of Non-Applicability (RONA) satisfies the General Conformity Rule. As such, the RONA documents the ARNG's decision not to prepare a written conformity determination for the Proposed Action. BMPs, such as use of water to control dust during construction operations, would sufficiently minimize significant airborne particulate release. Mobile source emissions during construction would result in direct, less than significant, short-term adverse air quality impacts.

5.3.2 Effects of Alternative 5 (No-Action Alternative)

No impact to air quality would be anticipated due to implementation of Alternative 5.

5.3.3 Management/Mitigation Measures (Alternative 3)

To control or to minimize construction and operational emissions, the following Standard Operating Procedures (SOPs)/BMPs will be used for every proposed project involving on-site construction:

- Use appropriate dust suppression methods during on-site construction activities. Recommended methods include: application of water, soil stabilizers, or vegetation; use of wind break enclosures; use of covers on soil piles and dump truck loads; use of silt fences; and suspension of earth-movement activities during high-wind conditions
- Maintain a speed of less than 15 miles per hour (mph) with construction equipment on unpaved surfaces
- Employ a construction management plan in order to minimize interference with regular motor vehicle traffic
- Use electricity from power poles instead of generators when possible
- Repair and service construction equipment according to the regular maintenance schedule recommended for each equipment type
- Use low-VOC architectural materials and supplies equipment
- Incorporate energy-efficient supplies when feasible.

Implementation of the above management/mitigation measures would further reduce identified minor, adverse air quality impacts.

5.4 Noise Environment

5.4.1 Effects of Alternative 3 (Preferred Alternative)

Implementation of Alternative 3 would result in short-term, direct impacts to the noise environment from construction of the proposed facilities associated with the CLTF; however, the nearest residential community is located approximately 2 miles from the proposed CLTF site. In



addition, construction activities would be conducted during daylight hours, resulting in minor, adverse impacts to the region.

Furthermore, based on information the U.S. Army Center for Health Promotions and Preventative Medicine (USACHPPM) has provided, the TNM has concluded that the 65-dBA contour would extend approximately 600 feet from the road centerline. As with construction noise, vehicle noise would be relatively localized, resulting in minor, adverse impacts to the region.

5.4.2 Effects of Alternative 5 (No-Action Alternative)

No impact to the noise environment would be anticipated due to implementation of Alternative 5.

5.4.3 Management/Mitigation Measures (Alternative 3)

No management/mitigation measures are required.

5.5 Geology, Topography, and Soils

5.5.1 Effects of Alternative 3 (Preferred Alternative)

Implementation of Alternative 3 would involve site preparation associated with the proposed project components. Based on the Proposed Action as defined in **Section 2.0**, the proposed project components would encompass approximately 110 acres. Construction would occur within approximately 23 acres of previously disturbed areas, including roadways, structural construction, and borrow activities. The remainder of the construction would occur within mature Pine/Oak - Oak/Pine forest, herbaceous-dominated open fields, and successional vegetation. No impacts to geological resources (i.e., through deep excavation) would be anticipated. None of the soils within the project study area are considered either Prime Farmland soils or soils of statewide importance.

During construction, short-term soil erosion and sedimentation impacts could be possible as the proposed buildings and other project components are constructed. Construction would remove vegetative cover, disturb the soil surface, and compact the soil. The soil would then be susceptible to erosion by wind and surface runoff. Exposure of the soils during construction has minor potential to result in increased sedimentation of local streams. As identified in **Section 4.6.3**, soils found within the project study area have severe potential for wind erosion and slight to moderate potential for water erosion. This potential erosion during construction would be a direct, minor, short-term adverse soils impact.

5.5.2 Effects of Alternative 5 (No-Action Alternative)

No impacts to geology, topography, and soils would be anticipated due to implementation of Alternative 5, as no construction would occur.

5.5.3 Management/Mitigation Measures (Alternative 3)

Prior to initiation of any on-site construction, the NJARNG shall:



- Prepare a detailed, site-specific Erosion and Sedimentation (E&S) Control Plan to address all earth-disturbance aspects of the Proposed Action, including all project components. The E&S Control Plan would involve measures, including specific guidelines and engineering controls, to mitigate anticipated erosion and resultant sedimentation impacts from establishment and operation of the proposed facilities. Measures may include use of filter fences, sediment berms, interceptor ditches, and/or other sediment control structures, and seeding/re-vegetation of areas temporarily cleared of vegetation. Re-vegetation plans and requirements included in the E&S Control Plan shall include planting during the optimum seeding season, whenever possible. Use of native grasses for re-vegetation of disturbed soils should be addressed in the E&S Control Plan as required under the provisions of the Pinelands Comprehensive Management Plan. No plant materials should be used from species considered invasive as defined by EO 13112; regionally native plant species should be favored as required by EO 13148.
- Submit the site-specific E&S Control Plan to the Ocean County Soil Conservation District office for review and approval. The NJARNG would receive certification from the Ocean County Soil Conservation District prior to initiating construction.

If measures in the E&S Control Plan are approved and correctly utilized for site development and operation, soil erosion and resulting sedimentation of local streams will be minimized to less-than-significant levels. Successful implementation of these measures will ensure that the Proposed Action is compliant with Federal and state water quality standards, and will minimize both short- and long-term potential for erosion and sedimentation.

5.6 Water Resources

5.6.1 Effects of Alternative 3 (Preferred Alternative)

No indirect impacts to surface or groundwater resources would be anticipated due to implementation of Alternative 3, provided that the measures described in **Section 5.5.3** are implemented to control the indirect impacts of soil erosion and sedimentation.

No jurisdictional wetlands, surface waters, or 100- or 500-year floodplains are located within the proposed CLTF site or within the proposed tank trail. The proposed natural gas line passes through wetland areas, crosses North Ruckles Branch and four tributaries to Middle Ruckles Branch, and passes through a designated 100-year floodplain for North Ruckles Branch; however, the proposed natural gas line would be installed down the middle of the existing South Boundary Road, and would be directionally trenched underneath wetlands and surface waters.

Minor, adverse groundwater quantity impacts would be anticipated due to implementation of Alternative 3. Construction of proposed project components at the Lakehurst NAES would require installation of a single 50 gpm well, into the Cohansey Sand Aquifer, for potable water supply. However, a significant increase in groundwater use would not be anticipated due to implementation of Alternative 3, as it would not result in a substantial increase of military personnel regularly present within the project study area. The proposed CLTF would employ a small number of permanent employees. Although larger numbers of military personnel may be present at the proposed new facilities during training sessions, they would be present only for



the duration of the training, which usually occurs on a limited number of weekends throughout a given month.

Construction of the proposed facilities would involve paving previously undisturbed land areas, increasing the amount of impermeable surface area and the potential for additional runoff into storm water receptors. Storm water collection systems would be designed to account for the increase in storm water runoff. As such, long-term, minor, adverse impact to increased flood potential would be anticipated.

A closed loop wastewater recycling system for Phases 1 and 2 would collect vehicle wash water, paint stripping booth wastewater, and wastewater from interior floor drains and utility sinks. Phase 4 of the proposed CLTF involves construction of a tank bath. The facility would be designed to include a wash rack that would be connected to a closed loop oil/water separator that would recycle water and discharge any contaminants into a contaminant tank for proper disposal. Proper engineering design and operation would ensure that no significant adverse impacts on water quality from these activities would be expected.

The Preferred Alternative involves a cannibalization point for vehicle dismantling activities. NJARNG SOPs require draining all fluids from vehicles and steam-cleaning engines and undercarriages prior to relocation to the cannibalization point. NJDMAVA has determined that an ARNG cannibalization point is not equivalent to a civilian automobile junkyard. The possibility of residual trace amounts of oil exists at the sites. The NJARNG will develop a site-specific Pollution Prevention Plan to avoid and minimize pollutant discharges into the project study area; therefore, minor, adverse impacts would be anticipated.

It is also possible that oil or other materials could spill from vehicles and equipment used during construction and operation of the facility. However, all equipment would be required to be in good condition and to be properly maintained to avoid the potential for spills and leaks. Additionally, the NAES Environmental Department would coordinate Rapid Response and would contact state agencies for any spill that may occur.

5.6.2 Effects of Alternative 5 (No-Action Alternative)

No water resources impacts would be anticipated due to implementation of Alternative 5, as no construction would occur.

5.6.3 Management/Mitigation Measures (Alternative 3)

Implementation of Alternative 3 would require permitting that would involve coordination with the New Jersey Pinelands Commission. As per the New Jersey Pinelands Commission, the Proposed Action would require a Pinelands Public Development Approval and a Statewide General Permit #2. In addition, construction or development within a floodplain would require coordination with the Jackson Township Construction Code Official. If the appropriate construction permits are obtained through close consultation with the NJDEP, the New Jersey Pinelands Commission and the Jackson Township Construction Code Official during the planning and permitting process, then impacts to the floodplain will be reduced to less-than-significant levels.



In addition, vehicles and equipment will be properly maintained to prevent leaks of hazardous materials in accordance with the Lakehurst NAES SPCC plan. Erosion and sediment control measures will be strictly followed, during and after construction, in accordance with the Ocean County Soil Conservation District standards.

Furthermore, a licensed professional will prepare a storm water management plan with storm water calculations. The calculations should demonstrate compliance with the following standards:

- The total volume of runoff generated from any net increase in impervious surfaces by a 10-year storm of a 24-hour duration shall be retained and infiltrated on-site
- The peak rates of runoff generated by the parcel for a 2-year, 10-year and 100-year storm of a 24-hour duration shall not increase as a result of development of the Site.

These proposed construction techniques will reduce impacts to less-than-significant levels on the surface or groundwater resources within the project study area.

5.7 Biological Resources

5.7.1 Effects of Alternative 3 (Preferred Alternative)

Implementation of Alternative 3 would result in the removal of existing vegetation within the project study area during site preparation for the proposed project components. Removal of plant communities and habitat, and subsequent displacement of animal species, would result in a direct, minor, long-term adverse impact to biological resources within the project study area.

According to WEC, one species of special concern, the northern pine snake, occurs within the project study area, and is a New Jersey State Endangered Species. Removal of habitat for special status species could result in direct, significant, long-term adverse impacts to these special status species and/or their habitat at the Lakehurst NAES. However, NJDMAVA conducted extensive coordination with the New Jersey Pinelands Commission. Based on their 4 March 2004 letter, the Pinelands Commission has concluded that removal of habitat associated with the Proposed Action would not have irreversible adverse impacts on habitats or on the "local population" of the northern pine snake. The New Jersey Pinelands Commission has defined the local population to include the western two-thirds of Lakehurst NAES to the east (5,000 acres), the Collier Mills Wildlife and Game Refuge to the north (12,369 acres), the Manchester Fish and Wildlife Area to the south (2,396 acres), and privately owned lands east of Manchester Fish and Wildlife Area (1,200 acres), a total of approximately 20,000 acres (DMVA 2004). The Proposed Action would affect approximately 0.5 percent of what is considered the local population of northern pine snake. Based on this information, it can be concluded that the implementation of Alternative 3 would result in minor, adverse impacts to biological resources.

5.7.2 Effects of Alternative 5 (No-Action Alternative)

No impact to biological resources would be anticipated due to implementation of Alternative 5.



5.7.3 Management/Mitigation Measures (Alternative 3)

Implementation of Alternative 3 will require further consultation with the Lakehurst NAES Office of Natural Resources, New Jersey Pinelands Commission, and the NJDEP, Division of Fish, Game and Wildlife, to minimize impacts to the northern pine snake and to any other identified special status species both during and after construction. Management/mitigation measures that can reduce the significant, long-term negative impacts to less-than-significant levels include:

- Avoiding special status species and/or habitat for these species during construction activities
- Capturing individual animal species from within the project construction area prior to construction and relocating them to other suitable habitat
- Performing construction activities outside of the nesting and breeding season
- Monitoring for these species during facility construction and operation
- Fencing the perimeter of the CLTF site with appropriate gauge fencing to keep specimens outside of the proposed CLTF site.

Implementation of these management/mitigation measures will reduce the impact to any special status species to less-than-significant levels.

5.8 Cultural Resources

5.8.1 Effects of Alternative 3 (Preferred Alternative)

No impacts to cultural resources at the Lakehurst NAES would be anticipated due to implementation of Alternative 3. According to the NJDEP Deputy State Historic Preservation Officer (SHPO), no architectural or archaeological sites of historical significance are located within the project study area. Except for an area in the extreme southeastern corner of the project study area (where the potential for resources is moderate to high), potential for NRHP resources is extremely low. However, neither the CLTF nor associated improvements (e.g., utility lines, transportation access) are planned for installation in or near the southeastern corner of the project study area (see **Appendix C**).

The NJARNG has reviewed the 27 October 1999 Annotated Department of Defense American Indian and Alaska Native Policy and has concluded that this Federal proposed action does not have the potential to significantly affect Native American Traditional TCPs, protected tribal resources, tribal rights, sacred tribal sites, or Indian land. This assessment is based on available information provided by Lakehurst NAES. According to the Lakehurst NAES Archeological Sensitivity Map, the proposed Alternative 3 project area is classified as Low and Disturbed (see **Appendix C**). In addition, previous on-site surveys sponsored by Lakehurst NAES have yielded no evidential findings of Native American TCPs, protected tribal resources, tribal rights, sacred tribal sites, or Indian land. If Native American remains, TCPs, protected tribal resources, tribal rights, sacred tribal sites, or other cultural objects are discovered at the proposed Alternative 3 project site from normal operations or ground disturbing activities such as training operations, construction, and erosion by wind or water, the NJARNG will ensure compliance with all



applicable statutory, regulatory, and policy requirements, and will act in accordance with the approved NJARNG ICRMP and the Lakehurst NAES Cultural Resources Management Plan.

5.8.2 Effects of Alternative 5 (No-Action Alternative)

Since construction of proposed buildings and other project components within the project study area would not occur, no impact to cultural resources would be anticipated due to implementation of Alternative 5.

5.8.3 Management/Mitigation Measures (Alternative 3)

Implementation of Alternative 3 would not require an archeological and architectural survey of the sites prior to construction activities, since the NJDEP Deputy State Historic Preservation Officer did not identify any areas of concern. However, the New Jersey Pinelands Commission must validate and approve the NJDEP Deputy State Historic Preservation Officers findings of no areas of concern. In the case of an inadvertent discovery of prehistoric artifacts during site construction activities, all construction activities will stop and the NJDEP Deputy State Historic Preservation Officer and the Pinelands Commission will be contacted for further information and direction.

5.9 Socioeconomics

5.9.1 Effects of Alternative 3 (Preferred Alternative)

Implementation of Alternative 3 would likely require utilization of regional contractors for construction of the proposed project components at the Lakehurst NAES. Hiring regional contractors would provide jobs and revenue to local/regional residents. This would constitute a significant, short-term positive impact to the regional economy.

5.9.2 Effects of Alternative 5 (No-Action Alternative)

Since proposed project components at the Lakehurst NAES would not be constructed, no impact to socioeconomics would be anticipated due to implementation of Alternative 5.

5.9.3 Management/Mitigation Measures (Alternative 3)

No management/mitigation measures are required.

5.10 Environmental Justice

5.10.1 Effects of Alternative 3 (Preferred Alternative)

Based on information obtained from the U.S. 2000 Census, the project study area is not located within a region where high percentages of minority populations, low-income populations, or Native American tribes are present. Therefore, the Proposed Action would have no negative human health or environmental impacts on minority populations, low-income populations, or Native American tribes.



Implementation of Alternative 3 would require utilization of regional construction businesses for the construction of proposed project components at the Lakehurst NAES. Hiring regional businesses that may utilize minority and low-income employees would provide jobs for persons within these populations. This would constitute a short-term positive impact to minority and low-income populations.

5.10.2 Effects of Alternative 5 (No-Action Alternative)

No human health or environmental impacts on minority populations, low-income populations, or Native American tribes would be anticipated due to implementation of Alternative 5. If the proposed project components at the Lakehurst NAES were not constructed, the minority and low-income populations of Jackson Township, New Jersey would remain unchanged.

5.10.3 Management/Mitigation Measures (Alternative 3)

No management/mitigation measures are required.

5.11 Infrastructure

5.11.1 Effects of Alternative 3 (Preferred Alternative)

Implementation of Alternative 3 would require the update or installation of infrastructure components within the project study area as described below.

Construction of the proposed project components at the Lakehurst NAES would require the installation of a single 50 gpm well at a depth of 200 feet below grade, into the Cohansey Sand Aquifer for potable water supply. The well would extract less than 2,000 gpd from the Cohansey Sand Aquifer. Total maximum well water consumption for all four phases is estimated to be 4.5 mgy.

Based on the low pumping rate of 50 gpm at a well screening depth of 200 feet below grade, the well cone of depression will not influence the septic field discharge. In addition, a treatment system would be designed to filter out iron, disinfectants, radionuclides, and other contaminants to meet New Jersey and Federal drinking water standards. The installation of a well would result in long-term, minor, adverse impacts to water supply. These impacts would be anticipated based on the overall capacity of the public water supply.

Implementation of the Preferred Alternative would require the installation of a 2,000 gpd, on-site collection and disposal system for sanitary wastewater. On-site collection and disposal would be down gradient of the well location. Therefore, the installation of a septic system would result in long-term, minor, adverse impacts. This system pro-actively addresses both the Pinelands Commission prohibition against inter-basin transfer of water and recently promulgated NJDEP Watershed Management regulations which encourage groundwater discharge for maintenance of regional stream flows (ARH 2002).

Construction of the proposed project components at the Lakehurst NAES would require the installation of electric lines to the proposed CLTF site. GPU Energy currently provides electricity at the Lakehurst NAES. The addition of electrical lines within the project study area would result in significant, long-term positive impacts.



In addition, construction of the proposed project components at the Lakehurst NAES would require the addition of telecommunication lines to the Alternative 3 site. However, the addition of telecommunication lines would not impact telephone service to the region of the Lakehurst NAES.

Furthermore, construction of the proposed project components at the Lakehurst NAES would require an extension of the natural gas line to the Alternative 3 site. This extension would result in less than significant impacts to infrastructure.

The proposed CLTF would require the construction of a tank trail between the project study area and Fort Dix for travel by various military tactical and non-tactical vehicles. The proposed tank trail would cross Ocean County Route 539, allowing an approximate 0.25-mile visibility in either direction. The tank trail would include the upgrade (i.e., widening) of approximately 4,000 feet of an existing unpaved road, and the construction of approximately 1,900 feet of new roadway. The tank trail would be widened to at least 24 feet and would receive base stabilization through the use of crushed stone and/or recycled concrete. Construction of the proposed tank trail would have minor, long-term adverse impacts to local roadways.

Construction of proposed project components would require the upgrade (e.g., widening, paving) of the existing Lakehurst NAES South Boundary Road for access/egress to the developed eastern portion of the Lakehurst NAES. Construction of an access/egress between the proposed CLTF and the Lakehurst NAES would result in less than significant impacts to infrastructure in the region.

In addition, the Proposed Action would include the construction of a paved road for main entrance access/egress between Ocean County Route 539 and the proposed CLTF site. Construction of the main entrance access/egress would have nominal impacts to the local roadways due to limited volume of vehicles, except seasonally, approximately 3 months per year, during the Sunday peak hour (1:00 PM to 2:00 PM) where minor, long-term adverse impacts to Ocean County Route 539 would be expected.

The Traffic Impact Study concluded that intersection of Ocean County Route 539 and the proposed CLTF access/egress would operate at a Level of Service 'd' (delay of 25.1 to 35.0 seconds) during the weekday morning and evening peak hours. During the Saturday peak hour, the CLTF access/egress will operate at a Level of Service 'c' (delay of 15.1 to 25.0 seconds) and during the Sunday peak hour the CLTF access/egress would operate at a Level of Service 'f' (delay greater than 50 seconds); most likely due to seasonal traffic, occurring approximately 3 months per year. This study was based on current and projected employee populations; projected staff levels for the CLTF are 80 personnel (ORA 2001).

5.11.2 Effects of Alternative 5 (No-Action Alternative)

No impacts to the Lakehurst NAES infrastructure would be anticipated due to implementation of Alternative 5.

5.11.3 Management/Mitigation Measures (Alternative 3)

Prior to the performance of any activities involving digging, drilling, grading, or other subsurface disturbance activity, the NJARNG will contact New Jersey One-Call. Law requires the



notification of New Jersey One-Call whenever any activities involving digging, drilling, grading, or other subsurface disturbance activity is performed. In addition, the Directorate of Public Works at Fort Dix must be contacted for utility mark-outs, since New Jersey One-Call does not include all military utilities within the Fort Dix military installation. This service is used to notify utilities that may have underground utility lines or equipment within a specified work area. As an added measure, the NJARNG will review plans with Jackson Township and Plumstead Township to identify any additional city-owned underground utilities.

Construction of the proposed tank trail would require the implementation of safety measures to minimize impacts to Ocean County Route 539 motorists. A well-defined crossing must be constructed with a minimum of advance warning signs, special street-reinforced concrete roadway and approach slabs, and curb and guide rail in order to limit the possibility of vehicles turning from Ocean County Route 539 onto the crossing (ORA 2001). ORA has evaluated four possible crossing safety measure alternatives:

1. STOP sign-controlled intersection
2. Signal-controlled intersection
3. Signalized railroad-type crossing
4. Grade-separated crossing
 - Ocean County Route 539 overpass
 - Ocean County Route 539 underpass.

Each possible alternative has its own merits and, based on cost and desired operational characteristics, the best crossing scenario needs to be determined for the proposed CLTF (ORA 2001). However, ORA recommends a signalized railroad type crossing to balance costs with driver delay safety. A railroad type crossing would provide a physical barrier to control traffic flow in and out of the site without adversely affecting traffic on Ocean County Route 539 (ORA 2001). Further, ORA recommends that the traffic signal be deferred until Phase 3 of the CLTF project, to ensure that signal warrants are met and that the proposed signal can adequately handle the traffic associated with the full build-out of the site. Implementation of safety measures will reduce impacts to less-than-significant levels.

Impacts due to construction of a paved road for main entrance access/egress between Ocean County Route 539 and the proposed CLTF site will be reduced to less-than-significant levels if mobilization is limited during the Sunday peak hour (1:00 PM to 2:00 PM).

5.12 Hazardous and Toxic Materials

5.12.1 Effects of Alternative 3 (Preferred Alternative)

Due to consolidation of vehicles and vehicle maintenance operations, operation of the proposed CLTF would result in increased on-site hazardous and toxic materials. However, hazardous materials will be stored within secondary containment in accordance with applicable Federal, state, and local requirements. Hazardous waste sheds with secondary containment will also be used. Therefore, the proposed construction and operations activities associated with the CLTF would have minor, adverse impacts on the current conditions of the Site with implementation of the above procedures and the procedures described below.



5.12.2 Effects of Alternative 5 (No-Action Alternative)

Since no construction activities would occur, no impact to current site conditions would be anticipated due to implementation of Alternative 5.

5.12.3 Management/Mitigation Measures (Alternative 3)

The Lakehurst NAES operates under an SPCC plan. This plan requires that the contractor and/or the Lakehurst NAES maintain equipment to prevent spills or leaks of fuel or other potentially hazardous materials that could adversely affect the environment. Vehicles and equipment will be properly maintained to prevent these leaks of hazardous materials in accordance with the Lakehurst NAES SPCC plan, and/or an SPCC plan developed by the NJARNG and specifically designed for the proposed CLTF.

The event of a spill during construction activities would result in direct, minor, short-term adverse impacts to site conditions. In the event of a spill during construction activities, the contractor and/or NJARNG personnel will immediately contact the local fire department. Lakehurst NAES personnel will contact state agencies as required for spills.

5.13 Management/Mitigation Measures

In order to minimize the potential adverse impacts from the implementation of Alternative 3, a series of management/mitigation measures (e.g., common environmental safeguards/BMPs) have been formulated, as presented in the preceding sections.

5.13.1 Alternative 3

Implementation of Alternative 3 would result in the potential for:

- Increased air emissions from increased vehicular traffic and from impacts to air quality from construction activities
- Soil erosion and consequent water quality degradation
- Water quality degradation from potential release of hazardous substances used within the project study area during construction
- Current site contamination.

Construction of the proposed project components would involve the installation of a well for potable water supply and an on-site collection and disposal system for sanitary wastewater. In addition, the implementation of Alternative 3 may potentially impact a state-listed endangered species and a state-listed threatened species.

As a result, management/mitigation measures have been designed for Alternative 3 to minimize potential impacts in each of these areas. Implementation of these management/mitigation measures will minimize identified potential project impacts to acceptable levels. Identified management/mitigation measures for Alternative 3 are discussed below.



Air Quality

To control or minimize construction and operational emissions, the following SOPs/BMPs will be used for every proposed project involving on-site construction:

- Use appropriate dust suppression methods during on-site construction activities. Recommended methods include: application of water, soil stabilizers, or vegetation; use of wind break enclosures; use of covers on soil piles and dump truck loads; use of silt fences; and suspension of earth-movement activities during high-wind conditions
- Maintain a speed of less than 15 mph with construction equipment on unpaved surfaces
- Employ a construction management plan in order to minimize interference with regular motor vehicle traffic
- Use electricity from power poles instead of generators when possible
- Repair and service construction equipment according to the regular maintenance schedule recommended for each equipment type
- Use low-VOC architectural materials and supplies equipment.
- Incorporate energy-efficient supplies when feasible.

Geology, Topography, and Soils

Prepare a detailed, site-specific E&S Control Plan to address all earth-disturbance aspects of the Proposed Action, including all project components. The E&S Control Plan will include measures, specific guidelines, and engineering controls to mitigate anticipated erosion and resultant sedimentation impacts from establishment and operation of the proposed facilities. Measures may involve using filter fences, sediment berms, interceptor ditches, and/or other sediment control structures; and seeding/re-vegetation of areas temporarily cleared of vegetation. Re-vegetation plans and requirements in the E&S Control Plan shall include planting during the optimum seeding season when possible. Use of native grasses to re-vegetate disturbed soils shall be addressed in the E&S Control Plan as required under the provisions of the Pinelands Comprehensive Management Plan. No plant materials shall be used from species considered invasive as defined by EO 13112; regionally native plant species shall be favored as required by EO 13148.

Water Resources

Implementation of Alternative 3 will require permitting that would involve coordination with the New Jersey Pinelands Commission. As per the New Jersey Pinelands Commission, the Proposed Action will require a Pinelands Public Development Approval and a Statewide General Permit #2.

In addition, construction or development within a floodplain will require coordination with the Jackson Township Construction Code Official.



Biological Resources

Implementation of Alternative 3 required consultation with the Lakehurst NAES Natural Resources manager, NGB wildlife biologist, New Jersey Pinelands Commission, and USFWS in order to avoid or minimize impacts to identify special status species both during and after construction. Based on these consultations, in conjunction with record searches and on-site surveys, the northern pine snake was the only special status species identified (with the exception of an occasional transient bald eagle) as being known to occur at the Alternative 3 site. Concerning Alternative 3, the Pinelands Commission has concluded that “proposed development will not have an irreversible adverse impact on habitats that are critical to the survival of any local population of northern pine snakes”. Management measures that can reduce negative impacts as a result of implementing Alternative 3 include:

- Avoiding special status species and/or habitat for these species during construction activities
- Capturing individual animal species from within the project construction area prior to construction and relocating them to other suitable habitat
- Performing construction activities outside of the nesting and breeding season
- Monitoring for these species during facility construction and operation
- Fencing the perimeter of the CLTF site with appropriate gauge fencing to keep specimens outside of the proposed CLTF site.

Cultural Resources

Implementation of Alternative 3 does not require an archeological and architectural survey of the sites prior to construction activities, since the NJDEP Deputy State Historic Preservation Officer has not identified any areas of concern. However, the New Jersey Pinelands Commission must validate and approve the NJDEP Deputy State Historic Preservation Officers findings of no areas of concern.

If any of the construction activities reveal an artifact, work will cease and the proper authorities will be contacted to investigate the Site. In addition, consultation with the NJDEP Deputy State Historic Preservation Officer and the Pinelands Commission will be initiated.

Infrastructure

Prior to any activities involving digging, drilling, grading, or other subsurface disturbance activity, the NJARNG will contact New Jersey One-Call. Law requires the notification of New Jersey One-Call whenever any activities involving digging, drilling, grading, or other subsurface disturbance activity is performed. The Directorate of Public Works at Fort Dix must also be contacted for utility mark-outs since New Jersey One-Call does not include all military utilities within the Fort Dix military installation. This service is used to notify utilities that may have underground utility lines or equipment within a specified work area. As an added measure, the NJARNG will review plans with Jackson Township and Plumstead Township to identify any additional city-owned underground utilities



Construction of the proposed tank trail would require the implementation of safety measures to minimize impacts to Ocean County Route 539 motorists. A well-defined crossing must be constructed with a minimum of advance warning signs, special street-reinforced concrete roadway and approach slabs, and curb and guide rails to limit the possibility of vehicles turning from Ocean County Route 539 onto the crossing (ORA 2001). ORA has evaluated four possible crossing alternatives:

1. STOP sign-controlled intersection
2. Signal-controlled intersection
3. Signalized railroad-type crossing
4. Grade-separated crossing
 - Ocean County Route 539 overpass
 - Ocean County Route 539 underpass.

Each possible alternative has its own merits and, based on cost and desired operational characteristics, the best crossing scenario needs to be determined for the proposed CLTF (ORA 2001). However, ORA recommends a signalized railroad type crossing to balance costs with driver delay safety. A railroad type crossing would provide a physical barrier to control traffic flow in and out of the site without adversely affecting traffic on Ocean County Route 539 (ORA 2001).

Impacts from construction of a paved road for main entrance access/egress between Ocean County Route 539 and the proposed CLTF site will be reduced to less-than-significant levels if mobilization is limited during the Sunday peak hour (1:00 PM to 2:00 PM).

Hazardous and Toxic Materials

In case of a hazardous materials spill, the local fire department will be contacted and cleanup will be initiated immediately, as identified in the SPCC plan. State agencies will be contacted as required for spills.

5.13.2 Alternative 5

Since no construction would occur, no management/mitigation measures are required due to implementation of Alternative 5.

5.14 Cumulative Impacts

This section addresses the cumulative effects of the Proposed Action. Cumulative effects are defined by the CEQ in 40 CFR 1508.7 as:

"Impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."



CEQ regulations also state that addressed cumulative impacts should not be limited to those from actual proposals, but must include impacts from actions being contemplated (or that are reasonably foreseeable).

Adverse impacts likely to result from implementation of the Proposed Action under Alternative 3, as identified in **Sections 5.2** through **5.12**, include air quality, noise environment, biological resources, water resources, and hazardous and toxic materials unless the above-mentioned management/mitigation measures are implemented.

Net positive impacts likely to result from implementation of the Proposed Action under Alternative 3, as identified in **Sections 5.2** through **5.12**, include socioeconomics and environmental justice.

5.14.1 Projects in the Vicinity of the Proposed CLTF Site

5.14.1.1 Joint Installation Road Improvement

The Lakehurst NAES is implementing a Joint Installation Road Improvement project. The proposed project will improve existing gravel roads and will overlay existing asphalt pavement to provide a complete and usable paved roadway for military ground vehicles connecting Lakehurst NAES with Fort Dix Base and McGuire AFB. This joint installation roadway would provide a paved connection entirely on Federal land, allowing the U.S. Army, the U.S. Navy, and the U.S. Air Force to engage in joint missions, resource sharing, and equipment deployment enhancement (Lakehurst NAES 2005).

This proposed project involves surveying, tree clearing, excavation, earthwork (e.g., filling, grading, compacting), asphalt pavement installation, and other miscellaneous work involved with the installation of a new roadway. The new road will run along the fence line of the southwestern portion of the proposed CLTF site and will not impact the activities associated with the Proposed Action (Lakehurst NAES 2005).

An EA is required and is expected to begin shortly. It is anticipated that the EA process will be completed within a 6- to 9-month time frame. Project construction activities would impact approximately 0.25 acres of wetlands, resulting from the need to reconstruct five existing culverts (replacement of light duty elliptical metal culverts with concrete culverts) to support heavier vehicles (e.g., military equipment on trailers). Environmental permit requirements would include the following, and would be completed concurrently with the EA preparation (Lakehurst NAES 2005):

- Wetlands
- General Storm Water
- New Jersey Pinelands Commission
- Ocean County Soil Conservation District.

5.14.1.2 Eagle Flag Training Site

The Air Mobility Warfare Center through the U.S. Air Force has proposed to construct an Eagle Flag Exercise Site at Fort Dix and Lakehurst NAES (Wheeldon 2004). The proposed project is



still in the planning stages. The location ranges from 2.3 to 5.9 miles from the Proposed Action site and will not impact on activities associated with the Proposed Action (Kon 2005). Training exercises would be conducted quarterly.

5.14.1.3 East Coast Basing of C-17 Aircraft

The U.S. Air Force has proposed to base C-17 aircraft on the east coast of the U.S., including McGuire Air Force Base, New Jersey. This proposal also includes the construction and operation of an Assault Landing Zone runway at Lakehurst NAES. The location of the proposed C-17 Assault Landing Zone will be adjacent to the existing 6/24 runway at Westfield, approximately 4 miles northeast of the proposed CLTF project. The C-17 proposal has been assessed for potential environmental impacts in the document "Environmental Assessment for East Coast Basing of C-17 Aircraft". Due to the distance of this proposed action to the proposed CLTF site, and the different missions associated with each, the proposed C-17 will not generate any incremental cumulative environmental impacts in association with the impacts of the proposed CLTF project.

5.14.1.4 Relocation and Consolidation of the NJARNG Aviation Support Facility

The NJARNG has proposed relocating aviation assets from Army Aviation Support Facility (AASF) #1 and AASF#2 to Buildings 129, 307, and 608 at Lakehurst NAES, an action that would achieve consolidation of the modernized helicopter fleet. An EA is being prepared for this action to evaluate potential impacts. The location of this action is approximately 5.9 miles from the Proposed Action site and will not impact activities associated with the Proposed Action. The AASF #1 facilities at Mercer County Airport would continue to operate fixed wing aircraft assets, including C-12 and C-23, while the AASF #2 facilities at Picatinny Arsenal would be retained by the NJARNG for use as a Field Maintenance Shop to support ground vehicle maintenance operations. This Proposed Action would achieve more efficient operation of the rotary wing aircraft, and would bring supported units closer to their existing New Jersey training sites at Fort Dix, Lakehurst NAES, Warren Grove Range, and Brendan T. Byrne State Forest. Under the Proposed Action, rotary wing aircraft training would continue at the existing training sites and specific training activities would not change (Arrighi 2005).

5.14.1.5 Shopping Center in Manchester Township

Manchester Township has proposed to construct a shopping center at the intersection of New Jersey Route 70 and Ocean County Route 539. The proposed shopping center would be comprised of two adjacent site locations. Site 1 would encompass approximately 23 acres; proposed occupancy would be a grocery store, bank, restaurant, and a fast food restaurant. Site 2 would encompass approximately 10 acres; proposed occupancy would be a convenient store with gas station and a 14,000-ft² office space. The proposed shopping center would be located approximately 5 miles south of the project study area. The proposed project is still in the planning stages (Manchester Township 2005).



5.14.2 Cumulative Impacts Associated with the Proposed CLTF

5.14.2.1 Alternative 3

Air Quality

Implementation of Alternative 3 would result in direct, short-term adverse impacts associated with fugitive dust emissions caused by construction activities. These impacts will be mitigated to less-than-significant levels through the application of best management practices and dust control measures during construction activities and would not contribute to cumulative impacts.

Wetlands

Implementation of Alternative 3 would result in the disturbance of approximately 1,650 ft² of potential jurisdictional wetlands. Impacts associated with the construction will be mitigated to less-than-significant levels. No cumulative impacts would be anticipated due to implementation of Alternative 3.

Threatened and Endangered Species

Habitat to support a state-listed endangered species, the northern pine snake, exists within the Alternative 3 site. Implementation of Alternative 3 would result in the removal of habitat for this special status species and could result in direct, significant, long-term adverse impacts to this species and/or its habitat within the project study area; however, a consultation with the New Jersey Pinelands Commission has concluded that removal of habitat associated with the Proposed Action would not impact the “local population” of northern pine snake. The New Jersey Pinelands Commission has defined the local population to include the western two-thirds of Lakehurst NAES to the east (5,000 acres), the Collier Mills Wildlife and Game Refuge to the north (12,369 acres), the Manchester Fish and Wildlife Area to the south (2,396 acres), and privately owned lands east of Manchester Fish and Wildlife Area (1,200 acres), a total of approximately 20,000 acres (DMVA 2004). The Proposed Action would affect approximately 0.5 percent of what is considered the “local population” of northern pine snake. Based on this information, it can be concluded that implementation of Alternative 3 would result in minor, adverse impacts to biological resources. Impacts will be managed to less-than-significant levels through consultation with the New Jersey Pinelands Commission, the USFWS and the NJDEP, Division of Fish, Game and Wildlife, to develop a mutually acceptable plan to minimize impacts to these species and would not contribute to cumulative impacts.

Socioeconomics

Implementation of Alternative 3 would result in significant, short-term positive impacts to the regional economy of Jackson Township, New Jersey by providing construction jobs. Cumulative impacts to the Jackson Township economy would be positive.

Environmental Justice

Implementation of Alternative 3 would require the utilization of regional construction businesses. Hiring regional businesses that utilize minority and low-income employees would provide jobs



for persons within these populations. This would constitute an indirect, short-term positive impact. Cumulative impacts would be positive.

Infrastructure

The implementation of Alternative 3 would require the update or installation of infrastructure components within the project study area. The Traffic Impact Study, prepared by ORA in 2001, included a background traffic growth rate and capacity analysis. During the analysis, ORA contacted adjacent municipalities regarding future development that may impact the CLTF project study area; no significant developments were identified. Utilizing the NJDOT growth rate table, it was determined that Ocean County Route 539 will experience an estimated 21.8 percent traffic growth rate from 2001 to 2008 (ORA 2001). The Traffic Impact Study concluded, with regard to off-site study locations, Phase 1 and 2 of the CLTF would have no detrimental level of service impacts on the off-site study locations with all movements operating at acceptable levels of service (ORA 2001). Further, a railway type crossing, recommended by ORA to be deferred until Phase 3 of the CLTF, will provide a physical barrier to control traffic flow in and out of the proposed CLTF site without adversely affecting traffic on Ocean County Route 539. These improvements would result in less than significant cumulative infrastructure impacts to the region.

Hazardous and Toxic Materials

The implementation of Alternative 3 would result in the potential for a spill during construction activities and during operation of the facility. A spill occurring during construction activities or during operation of the facility would result in direct, minor, short-term adverse impacts to the Site conditions. Appropriate and quick spill response measures in the event of a spill during construction activities or during operation of the facility, and implementation of an SPCC plan, would not contribute to cumulative impacts.

5.14.2.2 Alternative 5

Air Quality

Implementation of Alternative 5 would result in no impacts to regional air quality and would not contribute to cumulative air quality impacts.

Noise

Implementation of Alternative 5 would result in no noise impacts and would not contribute to cumulative noise impacts.

Wetlands

Implementation of Alternative 5 would result in no impacts and no cumulative impacts to wetlands.



Surface Waters/Floodplains

Implementation of Alternative 5 would result in no impacts and no cumulative impacts to surface waters/floodplains.

Threatened and Endangered Species

Implementation of Alternative 5 would result in no impact on threatened or endangered species, or on any habitat that could support such species. Implementation of Alternative 5 would have no cumulative impacts on threatened or endangered species.

Socioeconomics

Implementation of Alternative 5 would result in no impacts and no cumulative impacts on the socioeconomics of Jackson Township, New Jersey.

Environmental Justice

Implementation of Alternative 5 would result in no impact and no cumulative impacts to environmental justice.

Infrastructure

Implementation of Alternative 5 would result in no impacts and no cumulative impacts to infrastructure.

Hazardous and Toxic Materials

Implementation of Alternative 5 would result in no impact and no cumulative impacts to hazardous or toxic materials.



6.0 Comparison of Alternatives and Conclusions

This EA has evaluated the potential environmental, cultural, and socioeconomic impacts from the proposed construction and use of the following improvements for the CLTF at the Lakehurst NAES:

- Constructing the CLTF using a phased approach:
 - Phase 1: Wheeled Vehicle Maintenance Shop - 109,000 ft²
 - Phase 2: Unit Training Equipment Site - 84,000 ft²
 - Phase 3: Regional Training Facility - 90,000 ft²
 - Phase 4: Controlled Humidity Vehicle Storage Facility - 325,000 ft² and an Advanced Tank Bath Facility - 1,350 ft².
- Upgrading to approximately 4,000 feet of an existing unpaved road (i.e., widening) and the construction of approximately 1,900 feet of new roadway between the proposed CLTF and the military training ranges at Fort Dix for travel by various military tactical and non-tactical vehicles
- Upgrading the existing Lakehurst NAES South Boundary Road for access/egress to the developed eastern portion of the NAES
- Extending the existing natural gas line within the existing South Boundary Road to the proposed CLTF site.

These project components would alter approximately 140 acres of Lakehurst NAES property. The EA has determined two feasible alternatives for the Proposed Action:

- Alternative 3: Preferred Alternative – Construct the CLTF on a 140-acre site at the western perimeter of the Lakehurst NAES at the former Lakehurst SATCOM site
- Alternative 5: No-Action Alternative – Do not construct the CLTF and continue to utilize the substandard logistical support and training facilities currently operated by the NJARNG.

6.1 Comparison of the Environmental Consequences of the Alternatives

Implementation of Alternative 3 would result in *net beneficial* impacts to the local socioeconomic environment and environmental justice at the Lakehurst NAES. *Adverse* impacts would be anticipated in the form of potential impacts to:

- Air quality due to increased mobile emissions and fugitive dust (minor, adverse impacts without management/mitigation)
- Noise environment due to increased vehicle operations (minor, adverse impacts without management/mitigation)



- Biological resources (sensitive species); loss of habitat for the northern pine snake and the grasshopper sparrow due to land clearing managed to less-than-significant levels through consultation with the New Jersey Pinelands Commission, the USFWS and the NJDEP, Division of Fish, Game and Wildlife)
- Groundwater due to on-site disposal system, washbays, and vehicle storage areas (minor, adverse impacts with management/mitigation)
- Soil erosion (minor, adverse impacts with management/mitigation)
- Local traffic due to tank trail crossing (minor, adverse impacts with management/mitigation).

Most of these impacts would be lowered to acceptable levels with implementation of the management/mitigation measures identified in **Sections 5.13** and **5.14**. Based on the analysis presented in this EA, Alternative 3 is the feasible build alternative for the Proposed Action.

Alternative 5, the No-Action Alternative, was not found to satisfy the purpose of or need for the Proposed Action. This alternative would not consolidate NJARNG logistical support functions into an efficient, modern facility that is within close proximity to the Fort Dix training range and facilities. However, Alternative 5 would have no impacts to regional air quality; local noise environment; on-site geology, topography, or soils; or regional biological resources.

6.2 Conclusions

The evaluation performed within this EA concludes that no significant impact to any federally listed threatened or endangered species would be anticipated; however, adverse impacts to approximately 110 acres of habitat for the northern pine snake, a state-listed endangered species, would occur. This impact equals approximately 0.5 percent of what is considered the "local population" of northern pine snake; therefore, the Proposed Action would not negatively impact the local population of the northern pine snake, and would result in minor, adverse impacts to biological resources. Implementation of Alternative 3 would not result in a negative cumulative impact to the potential habitat of the northern pine snake. Implementation of management measures serves to further reduce negative impacts to this special status species.

Implementation of Alternative 3 may also result in the disturbance of approximately 1,650 ft² of potential jurisdictional wetlands; however, through consultation with the New Jersey Pinelands Commission, impacts will be reduced to less-than-significant levels.

The implementation of Alternative 3 would require a Pinelands Development Permit. The natural gas line would be located within existing developed areas such as roads, trails, and bridges.

The proposed tank trail associated with Alternative 3 would cross over Ocean County Route 539, between the proposed CLTF site and the military ranges at Fort Dix, for travel by various military tactical and non-tactical vehicles. The location of this tank trail would allow an approximate 0.25-mile visibility in either direction on Ocean County Route 539. The proposed tank trail would require the implementation of safety measures (e.g., railroad-type crossing) to



minimize impacts to Ocean County Route 539 motorists. This implementation of safety measures would reduce the impacts to less-than-significant levels.

This analysis determines that an EIS is unnecessary for implementation of Alternative 3 and that a FONSI is appropriate. Positive impacts to the local socioeconomic environment and on-site environmental justice would be anticipated.

Implementation of Alternative 3 would fulfill the purpose of and need for the Proposed Action while minimizing impact potential. **Table 6-1** summarizes potential impacts for each alternative.

TABLE 6-1
Summary Descriptions of Impacts (with Mitigation)
Associated with Alternatives 3 and 5 at the Project Study Area

Resource Area	Alternative 3	Alternative 5 No-Action Alternative
Land Use	○	○
Air Quality	■	○
Noise	■	○
Geology, Topography, and Soils	■	○
Water Resources	●	○
Biological Resources	●	○
Cultural Resources	○	○
Socioeconomics	■	○
Environmental Justice	■	○
Infrastructure	●	○
Hazardous and Toxic Materials/Wastes	■	○

Key to Table 6-1 Symbols

Significant Adverse Impact	Minor Adverse Impact	No Impact	Minor Positive Impact	Significant Positive Impact
Long-Term Impact				
●	●	○	●	●
Short-Term Impact				
■	■	□	■	■



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7.0 References

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8.0 Glossary

Activity - A unit, organization, or installation that performs a function or mission (AR 200-1).

Ambient - The environment as it exists around people, plants, and structures.

Ambient Air Quality Standards - Those standards established according to the CAA to protect health and welfare (AR 200-1).

Aquifer - An underground geological formation containing usable amounts of groundwater which can supply wells and springs.

Attainment Area - A region that meets the National Ambient Air Quality Standard (NAAQS) for a criterion pollutant under the Clean Air Act (CAA).

Best Management Practices (BMPs) - Methods, measures, or practices to prevent or reduce the contribution of pollutants to U.S. waters. May be imposed in addition to, or in the absence of, effluent limitations, standards, or prohibitions (AR 200-1).

Compaction - The packing of soil together into a firmer, denser mass, generally caused by the pressure of great weight.

Contaminants - Any physical, chemical, biological, or radiological substances that have an adverse affect on air, water, or soil.

Council on Environmental Quality (CEQ) - An Executive Office of the President composed of three members the President appoints, subject to Senate approval. Each member shall be exceptionally qualified to analyze and interpret environmental trends, and to appraise programs and activities of the Federal Government. Members are to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs of the Nation, and formulate and recommend national policies to promote quality improvement of the environment.

Criteria Pollutants - The Clean Air Act (CAA) of 1970 required the USEPA to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), lead (Pb), nitrogen oxides (NO_x), and particulate matter less than 10 micrometers in diameter (PM-10).

Cultural Resources - The physical evidence of our Nation's heritage, including archaeological sites; historic buildings, structures, and districts; and localities with social significance to the human community.

Culvert - A drainage that crosses beneath a road.

Cumulative Impact - Environmental impact that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions,



regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Direct Effects - Effects that an action causes, and that occur at the same time and same place [40 CFR 1508.8 (a)].

Emission - A release of a pollutant.

Environmental Assessment/Environmental Impact Statement (EA/EIS) - An EA is a publication that provides sufficient evidence and analysis to show if a proposed system will adversely affect the environment or will be environmentally controversial. If the proposed system will adversely affect the environment or be controversial, an EIS is prepared to disclose impacts.

Erosion - The wearing away of land surface by wind and water.

Farmland - Cropland, pastures, meadows, and planted woodland.

Floodplain - Nearly flat plain along the course of a stream that is naturally subject to flooding.

FONSI - Finding Of No Significant Impact; a NEPA document.

Fugitive Dust - Particles that are light enough to be suspended in air and that are not caught in a capture or filtering system. For this document, "fugitive dust" refers to particles occurring in the air from moving vehicles and air movement over disturbed soils at construction sites.

Geographic Information System (GIS) - A computer system that allows environmental analysts to compile, analyze, and model information relevant to proposals that require environmental analysis. It is also a tool that assists decision making by providing a visual depiction of complex data, customized for the situation and circumstances associated with that decision.

Geology - Science that deals with the physical history of the earth, the rocks of which the earth is composed, and the physical changes in the earth.

Hazardous Substances - A substance as defined by section 101(14) of CERCLA:

- a. For the purpose of this regulation, a hazardous substance is any one of the following: 1) Any substance designated pursuant to section 311(b)(2)(A) of the CWA. 2) Any element, compound, mixture, solution or substance designated pursuant to Section 102 of CERCLA. 3) Any hazardous waste having the characteristics identified under the RCRA. 4) Any toxic pollutant listed under TSCA. 5) Any hazardous air pollutant listed under Section 112 of CAA. 6) Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to fraction subsection 7 of TSCA.
- b. The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above. 2)



Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

c. A list of hazardous substances is found in 40 CFR 302.4 (AR 200-1).

Hazardous Waste - A solid waste that, when improperly treated, stored, transported, or disposed, poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR section 261.3 or applicable foreign law, rule, or regulation (see also Solid Waste) (AR 200-1).

Hazardous Waste Storage - As defined in 40 CFR 260. 10, ". . . the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed, or stored elsewhere" (AR 200-1).

Hydrologic Soil Group - Four hydrologic soil groups are recognized by the NRCS and are provided in the Soil Survey for Lebanon County (USDA, 1983). The groups reflect the permeability of the soil based on texture, clay mineralogy, impervious layers, water tables, and depth. Because the infiltration rate generally is inversely related to runoff and erosion, the hydrologic soil group is an indirect index to site erodibility. Groups A and B have moderate infiltration rates when thoroughly wetted. Group C has slow infiltration rates when thoroughly wetted. Group D has very slow infiltration rates when thoroughly wetted. As a general rule, soils in Group C are considered borderline while soils in Group D should be avoided for use as maneuver areas.

Indirect Effects - Effects that are caused by the action and that occur later in time or farther removed in distance but that are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate; and related effects on air, water, and other natural systems, including ecosystems [40 CFR 1508.8 (b)].

Installation - A grouping of facilities, located in the same general vicinity, over which the installation commander has authority (AR 200-1).

Land Use Capability Class - The Land Use Capability Class System predicts the suitability of soils for cultivation based on erodibility, droughtiness, excessive wetness, or salinity.

Management/Mitigation - Measures taken to reduce adverse impacts on the environment.

Mobile Sources - Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources (AR 200-1).

Monitoring - The assessment of emissions and ambient air quality conditions. Monitoring techniques used are emission estimates, visible emission readings, diffusion or dispersion estimates, sampling, or measurement with analytical instruments (AR 200-1).



National Ambient Air Quality Standards (NAAQS) - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the Clean Air Act (CAA). Six pollutants are currently regulated by primary and secondary NAAQS: carbon monoxide (CO), lead, (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM-10), and sulfur dioxide (SO₂).

National Environmental Policy Act (NEPA) – U.S. statute that requires all Federal agencies to consider potential effects of Proposed Actions on the human and natural environment (AR 200-1).

Non-Attainment Area - An area that has been designated by the EPA or by the appropriate state air quality agency as exceeding one or more national or state ambient air quality standards.

Parent Materials - Original materials from which soil is broken down.

Particulates/Particulate Matter - Fine liquid or solid particles, such as dust, smoke, mist, fumes, or smog found in air.

Plant Community - A vegetative complex unique in its combination of plants that occurs in particular locations under particular conditions.

Pollutant - A substance introduced into the environment that adversely affects the usefulness of a resource.

Potable Water - Water that is suitable for drinking.

Quaternary - Geological time period extending from the present to approximately 2 million years ago.

Remediation - A long-term action that reduces or eliminates a threat to the environment.

Riparian Areas - Areas adjacent to rivers and streams that have a high density, diversity, and productivity of plant and animal species relative to nearby uplands.

Sensitive Species - Species occurring at the Site listed by The Nature Conservancy (TNC) and/or the Pennsylvania National Diversity Inventory (PNDI) as a species of concern. While these species may not be threatened or endangered at this time, they may become so in the near future because of humans or nature.

Significant Impact - According to 40 CFR 1508.27, "Significantly" as used in NEPA requires consideration of both context and intensity:

- a. *Context* - The significance of an action must be analyzed in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.



- b. *Intensity* - Refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

Soil - The mixture of altered mineral and organic material at the earth's surface that supports plant life.

Solid Waste - Any discarded material that is not excluded by section 261.4(a) or that is not excluded by variance granted under sections 260.30 and 260.3 1 (40 CFR 261.2).

Topography - Relief features or surface configuration of an area.

Toxic Substance - A harmful substance that includes elements, compounds, mixtures, and materials of complex composition.

Wetlands - Areas that are regularly saturated by surface or groundwater and are therefore characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Some examples are swamps, bogs, fens, marshes, and estuaries.

Wildlife Habitat - The set of living communities in which a wildlife population lives.



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FIGURES



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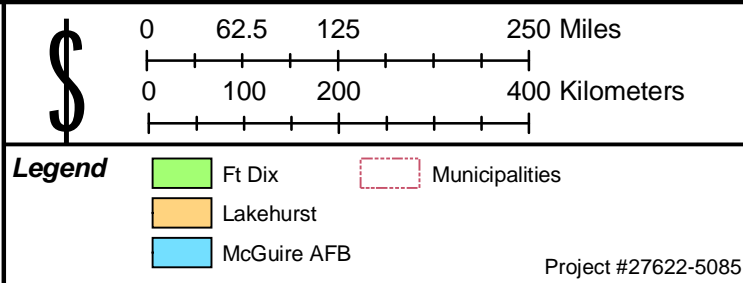
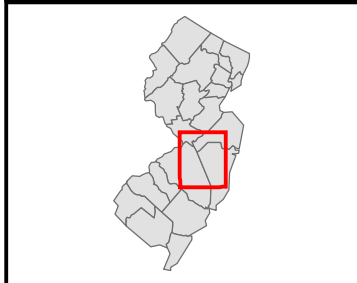
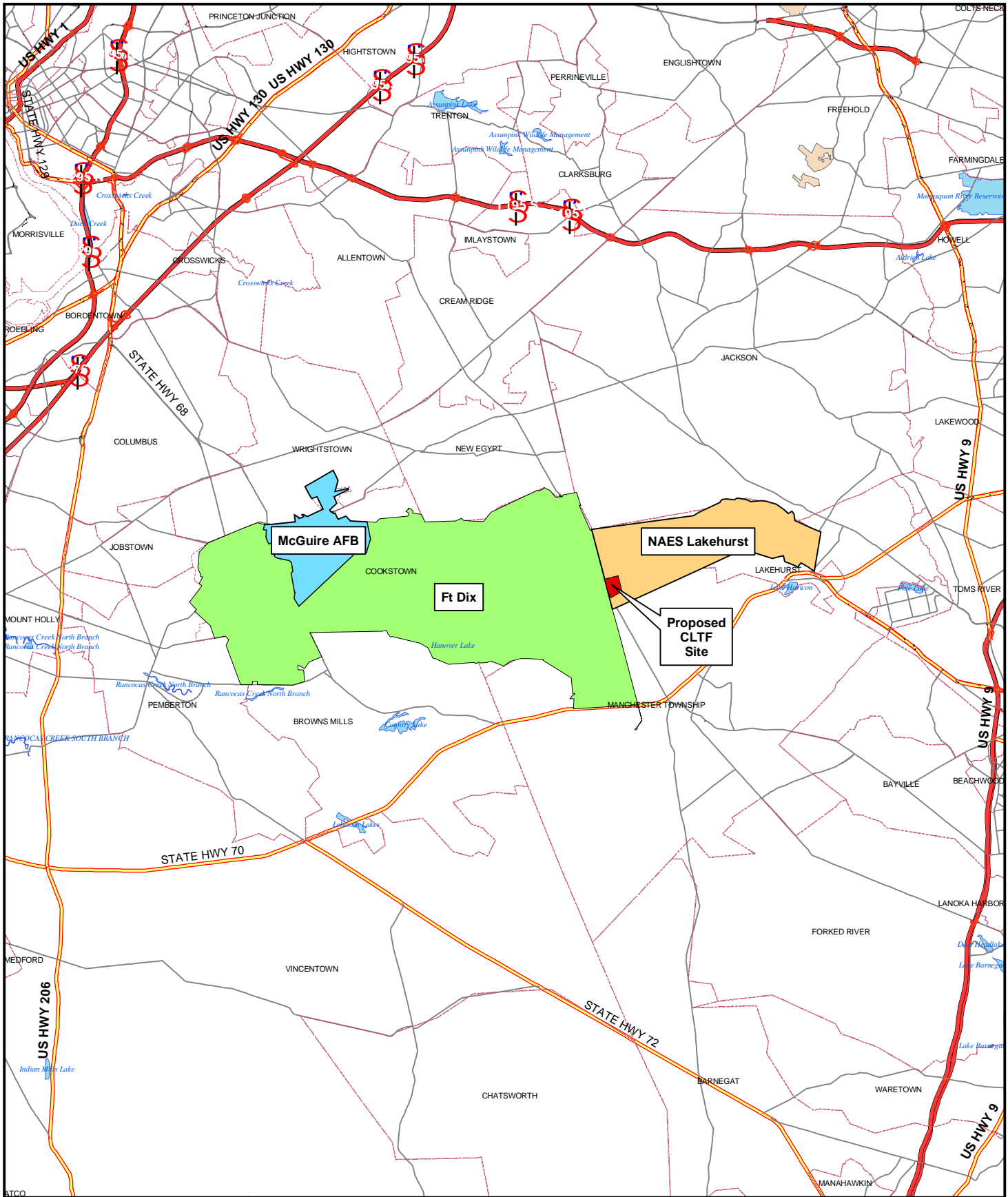
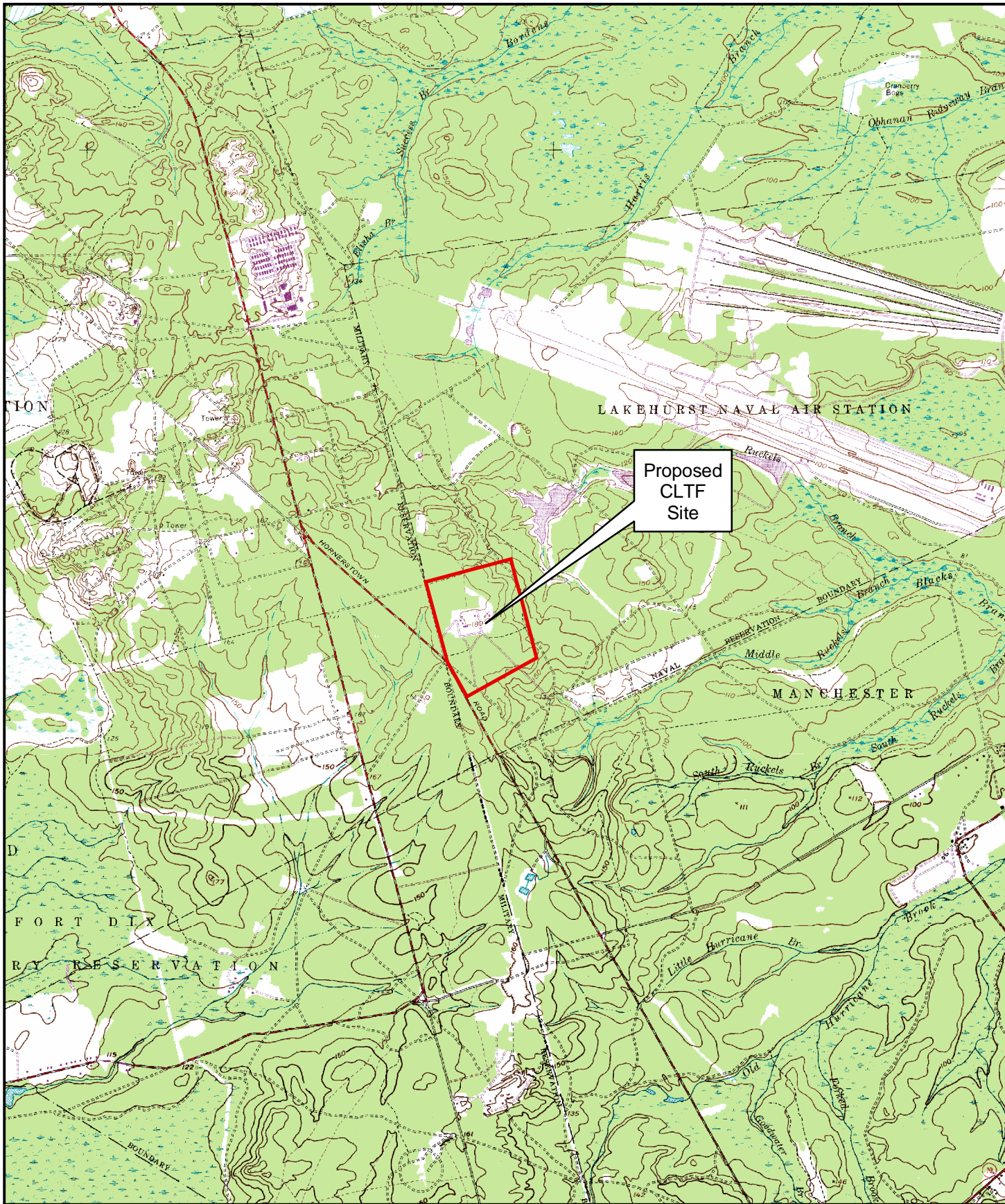


Figure 1-1
Regional Location Map
Proposed CLTF at
Lakehurst NAES

amec
EARTH & ENVIRONMENTAL, INC.
One Plymouth Meeting, Suite 850
Plymouth Meeting, PA 19462

Project #27622-5085



0 1,650 3,300 6,600 Feet
 0 600 1,200 2,400 Meters

Legend

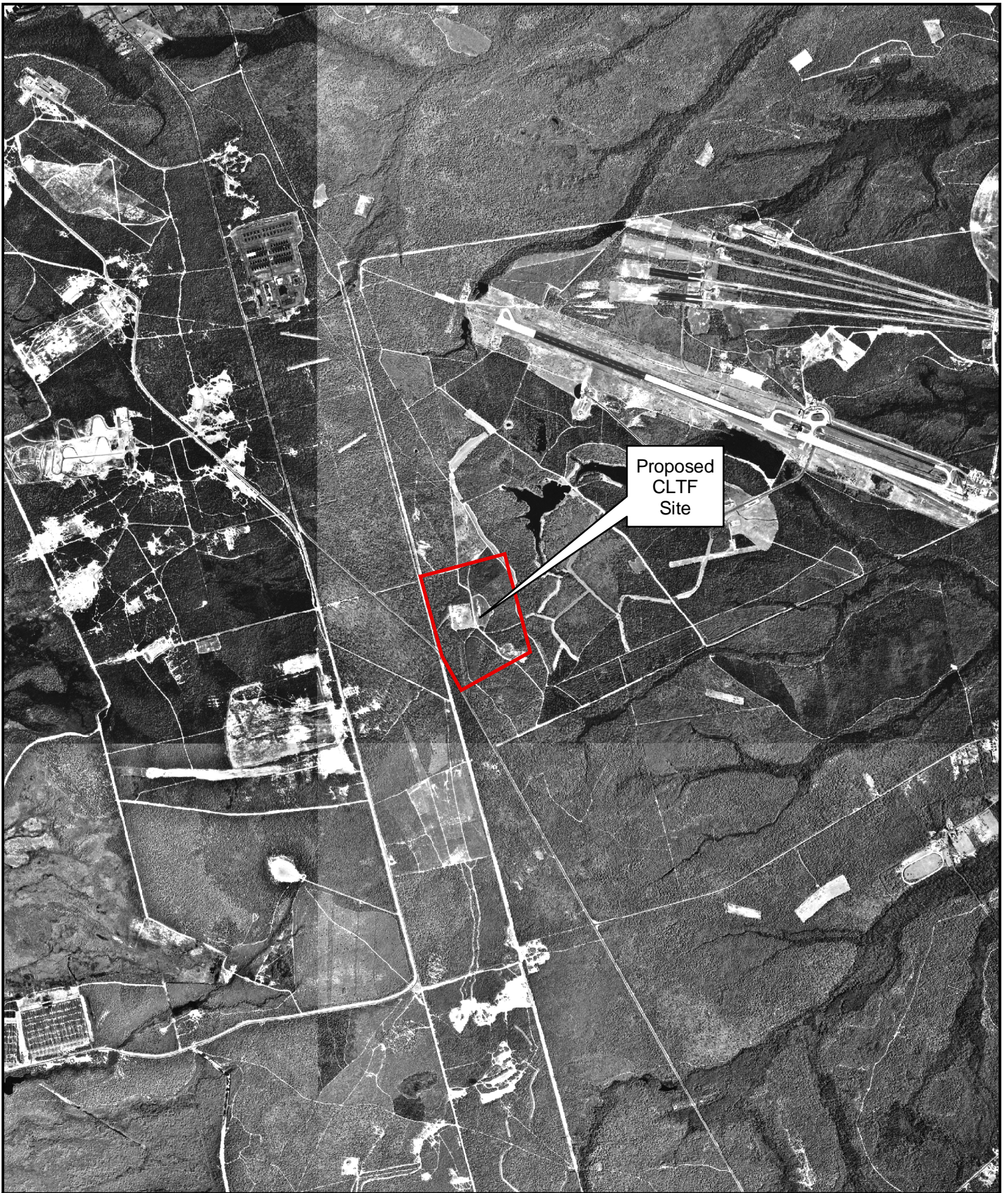
— Site Location Boundary

Figure 1-2
 Alt 3 Site Location Map
 Proposed CLTF at
 Lakehurst NAES



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0 1,650 3,300 6,600 Feet
 0 600 1,200 2,400 Meters

Legend

— Site Location Boundary

Figure 1-3
 Aerial Photograph
 Proposed CLTF at
 Lakehurst NAES

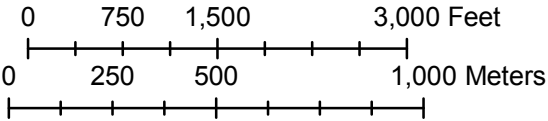
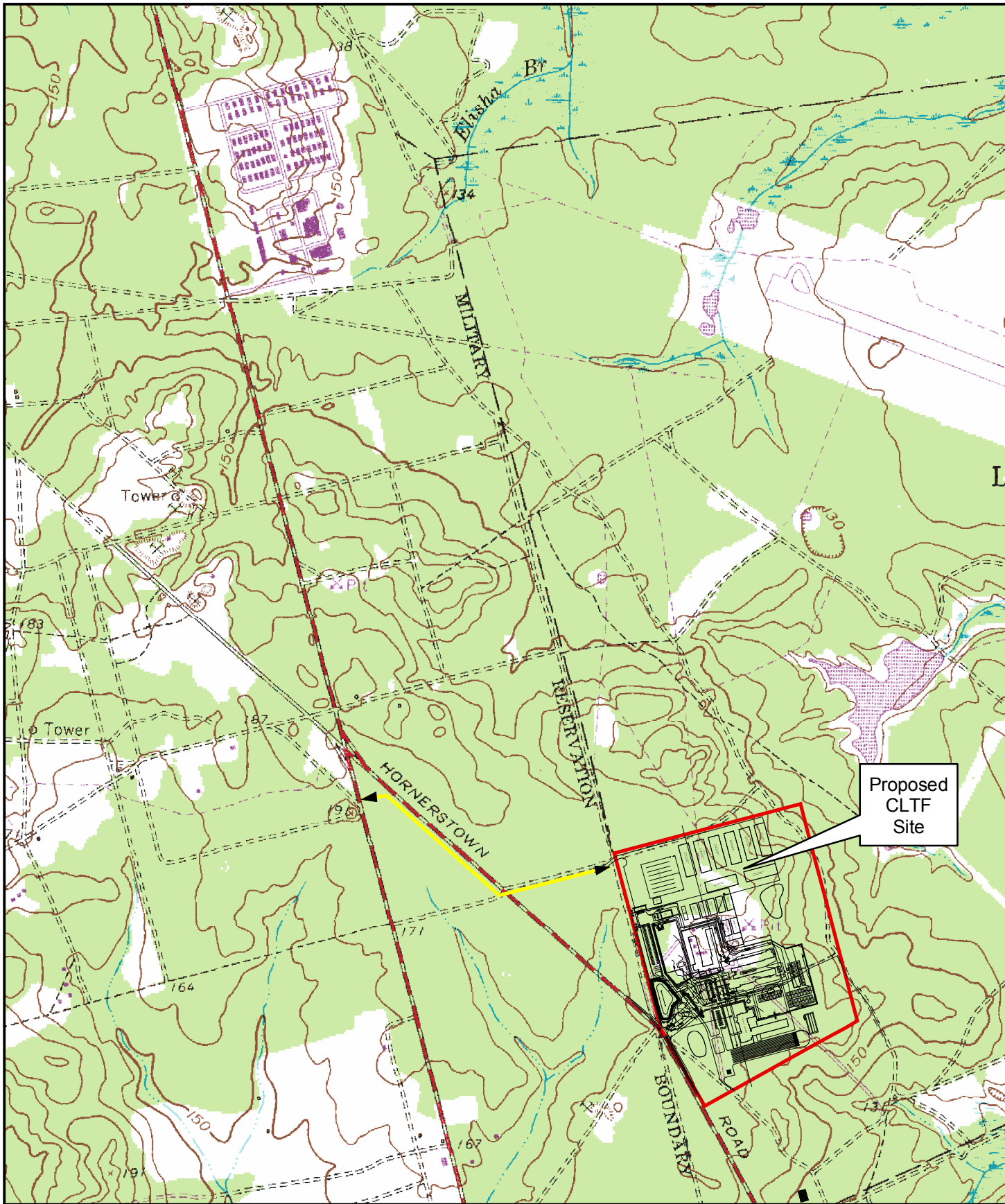
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Legend

- Site Location Boundary
- Proposed Route 1

Figure 2-1b
Alternative 3
Proposed Ft Dix Access Routes
Proposed CLTF at
Lakehurst NAES

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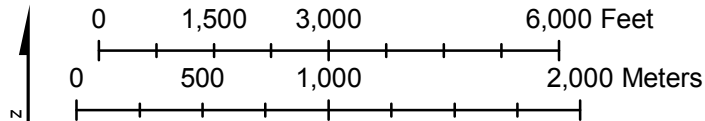
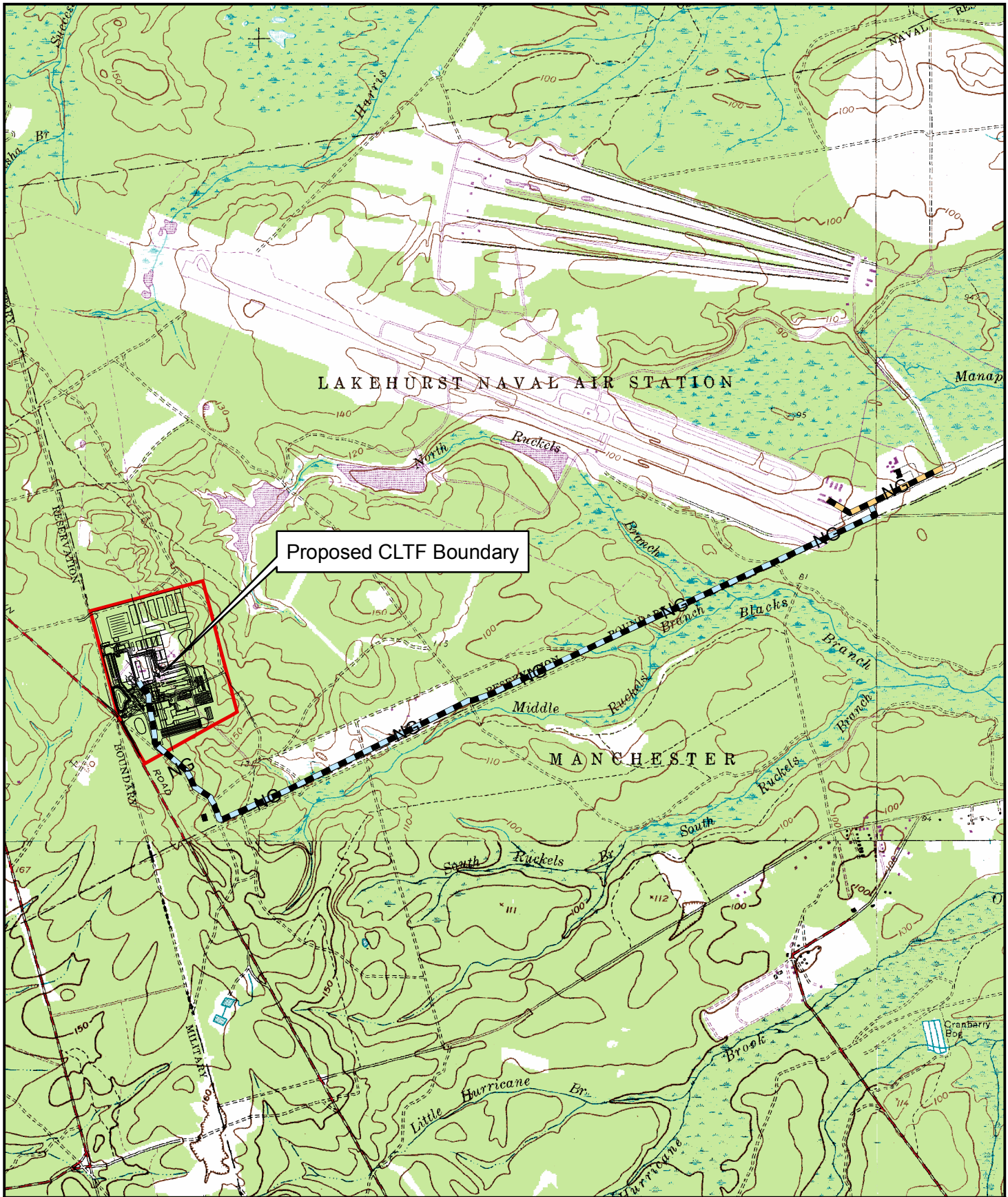


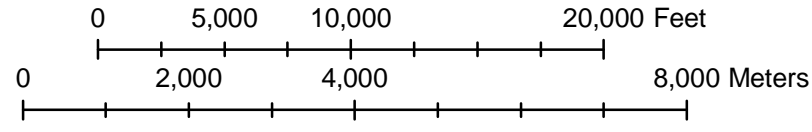
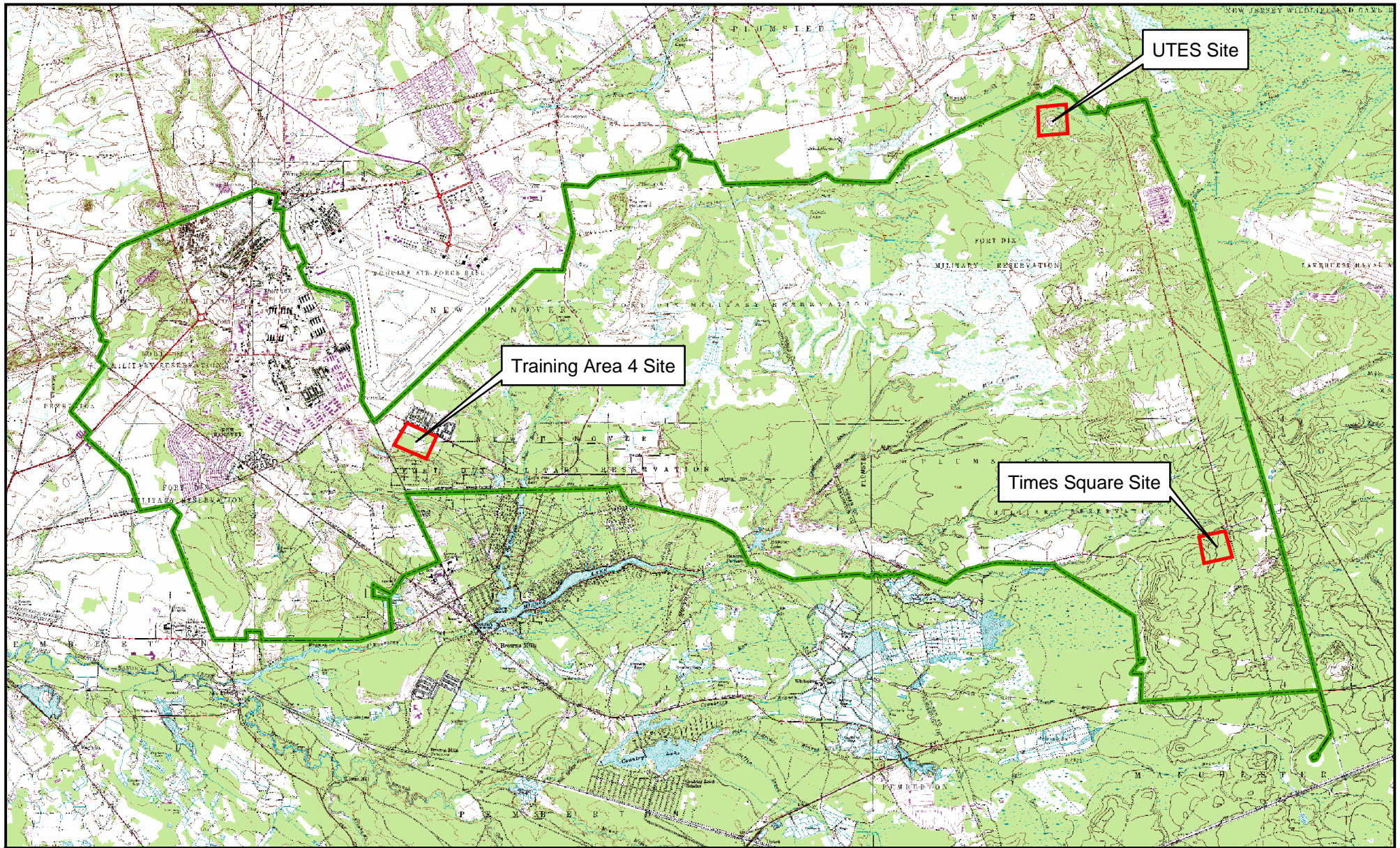
Figure 2-1c
Alternative 3
Proposed Natural Gas Line
Proposed CLTF at
Lakehurst NAES

Legend

-  Existing Gas Line
-  Proposed Gas Line
-  Site Location Boundary

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Legend

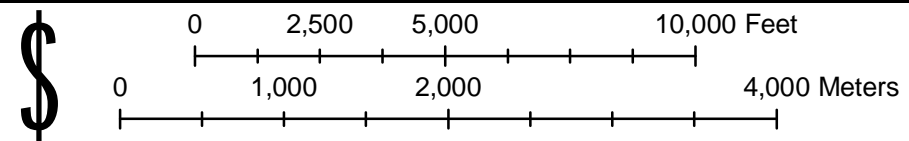
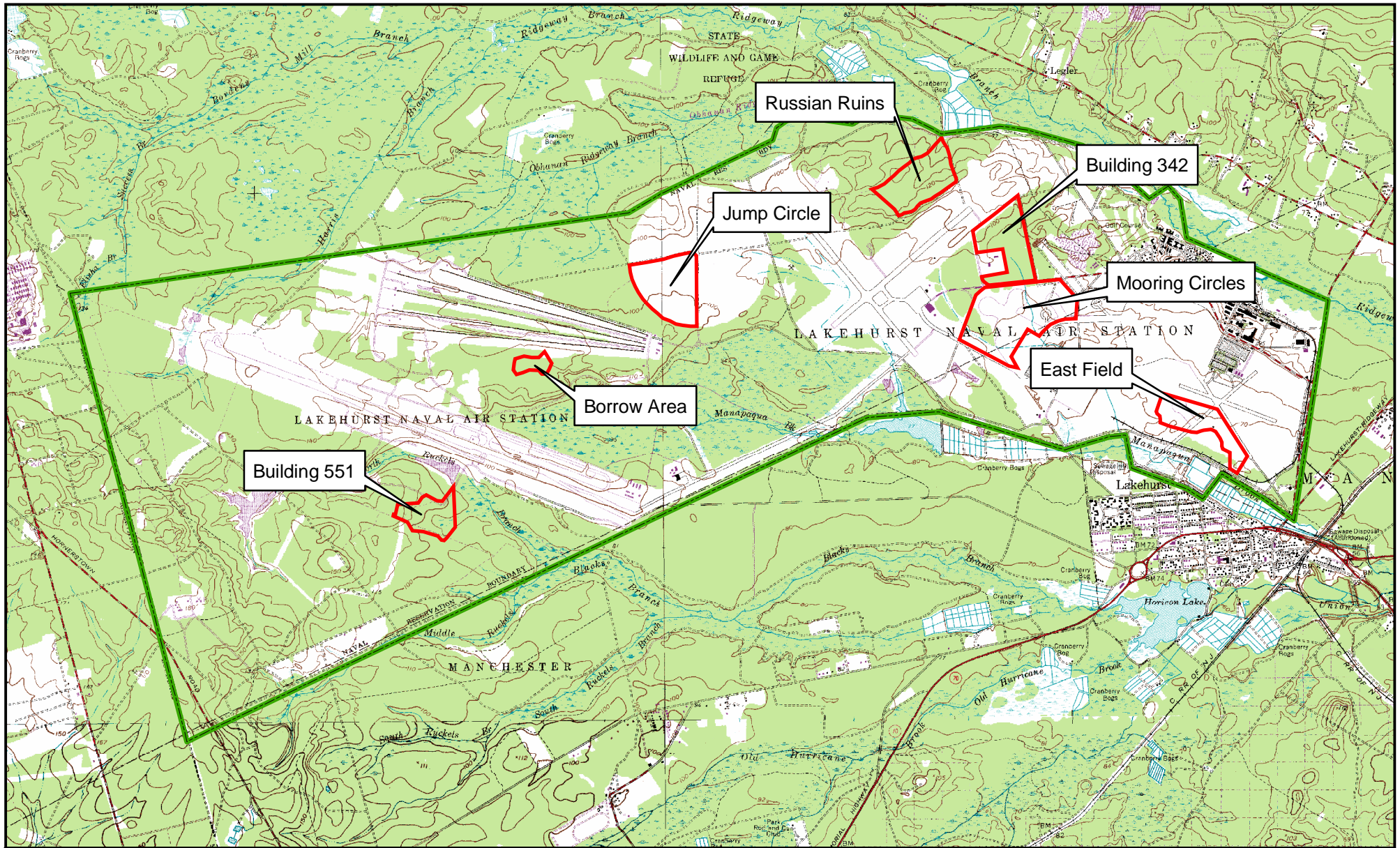
 Fort Dix Boundary

 Alternate CLTF Locations

Figure 3-1
Alternative 1
Locations of Sites at Fort Dix
Considered but Eliminated from Consideration

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Legend	
Lakehurst Boundary	Alternate CLTF Locations
Project #27622-5085	

Figure 3-2
Alternative 4
Locations of Sites at Lakehurst NAES
Considered but Eliminated from Consideration

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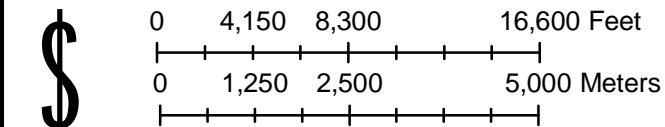
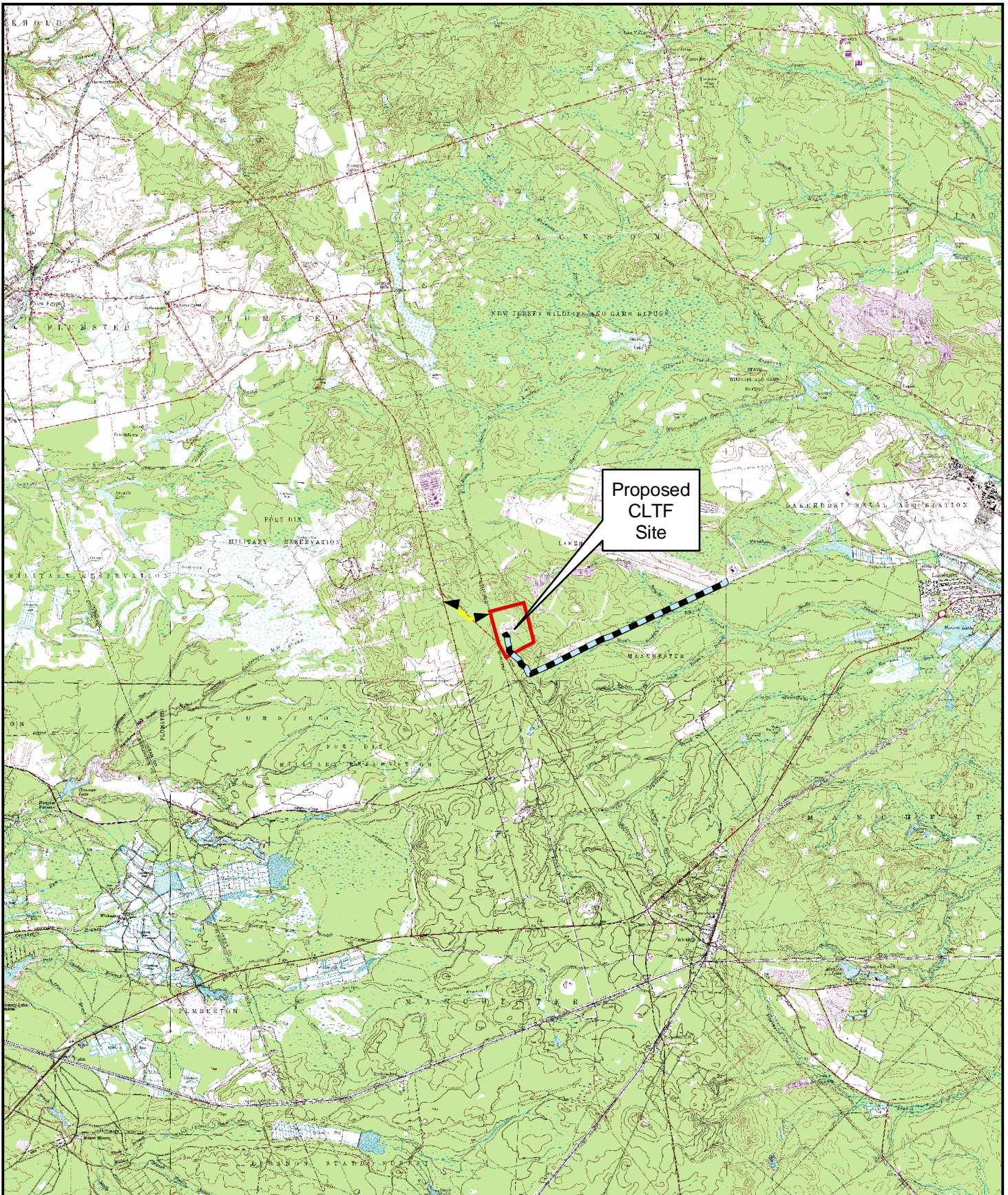


Figure 4-1
Regional Topographic Map
Proposed CLTF at
Lakehurst NAES

Legend

- Proposed Gas Line Proposed Tank Trail
 Site Location Boundary

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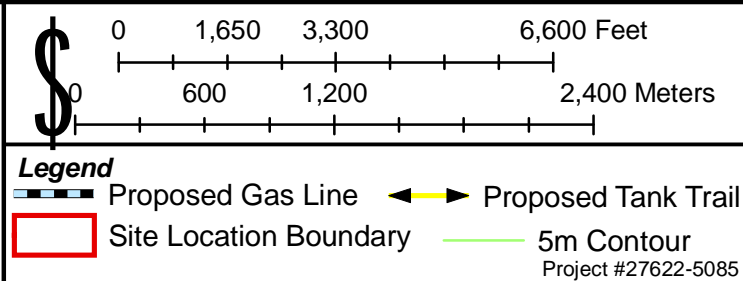
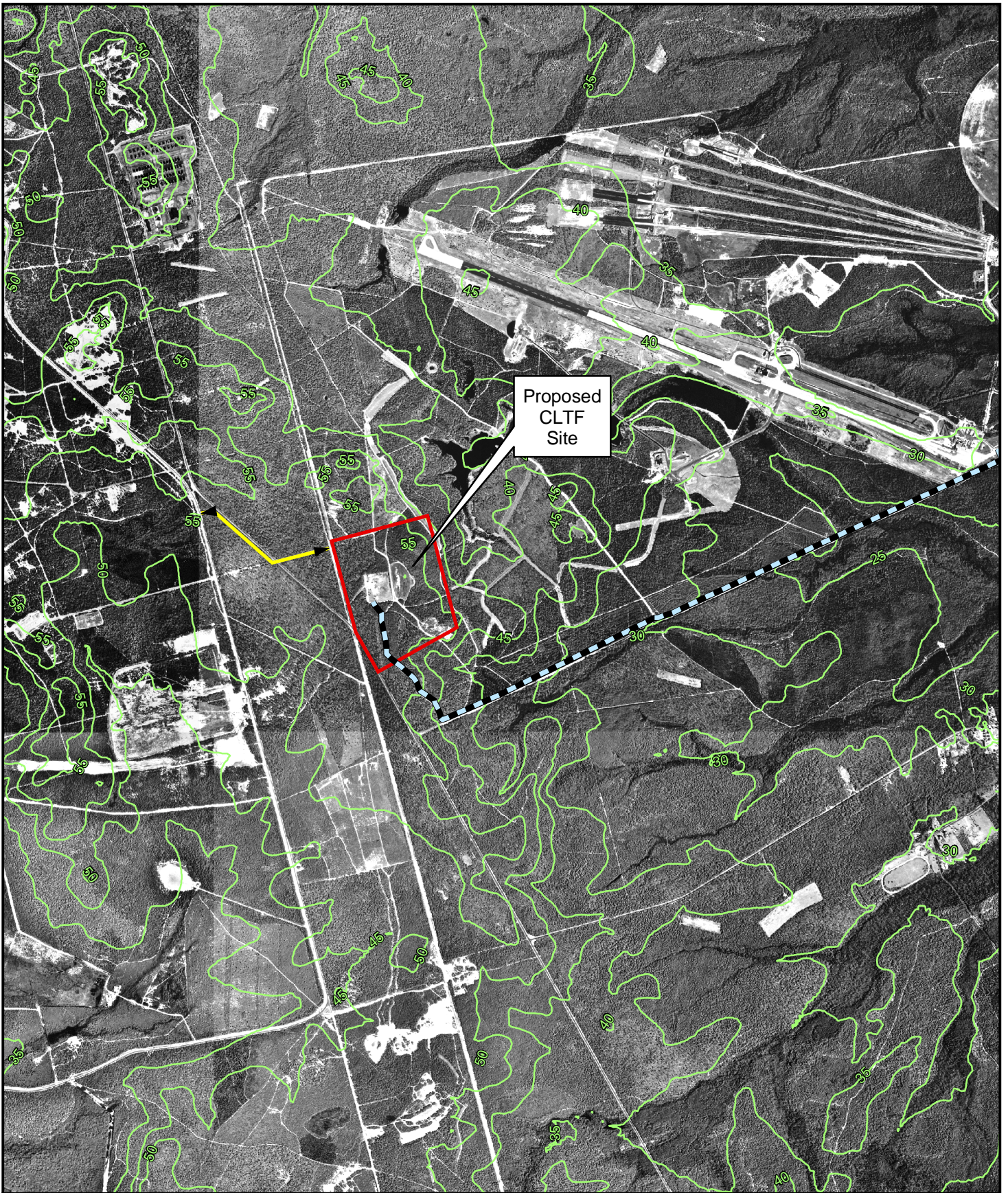


Figure 4-2
 Contour Map
 Proposed CLTF at
 Lakehurst NAES

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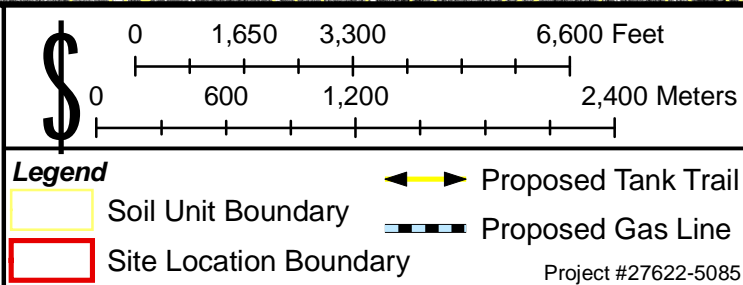
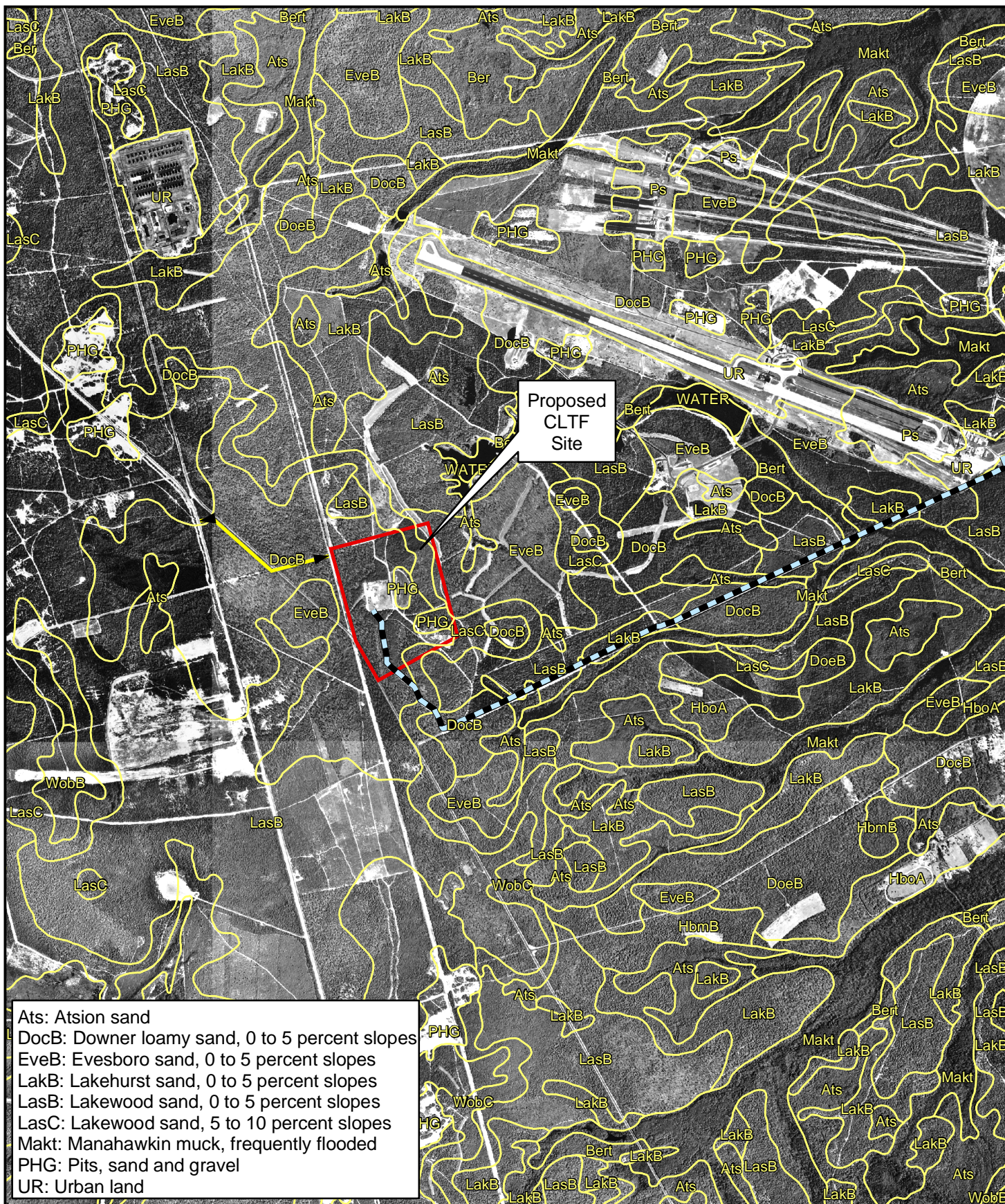


Figure 4-3
 Regional Soils Map
 Proposed CLTF at
 Lakehurst NAES

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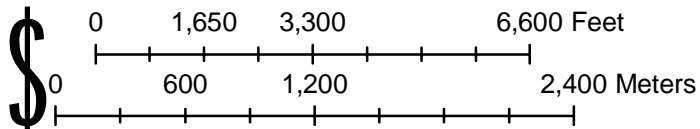


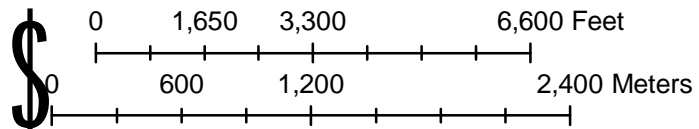
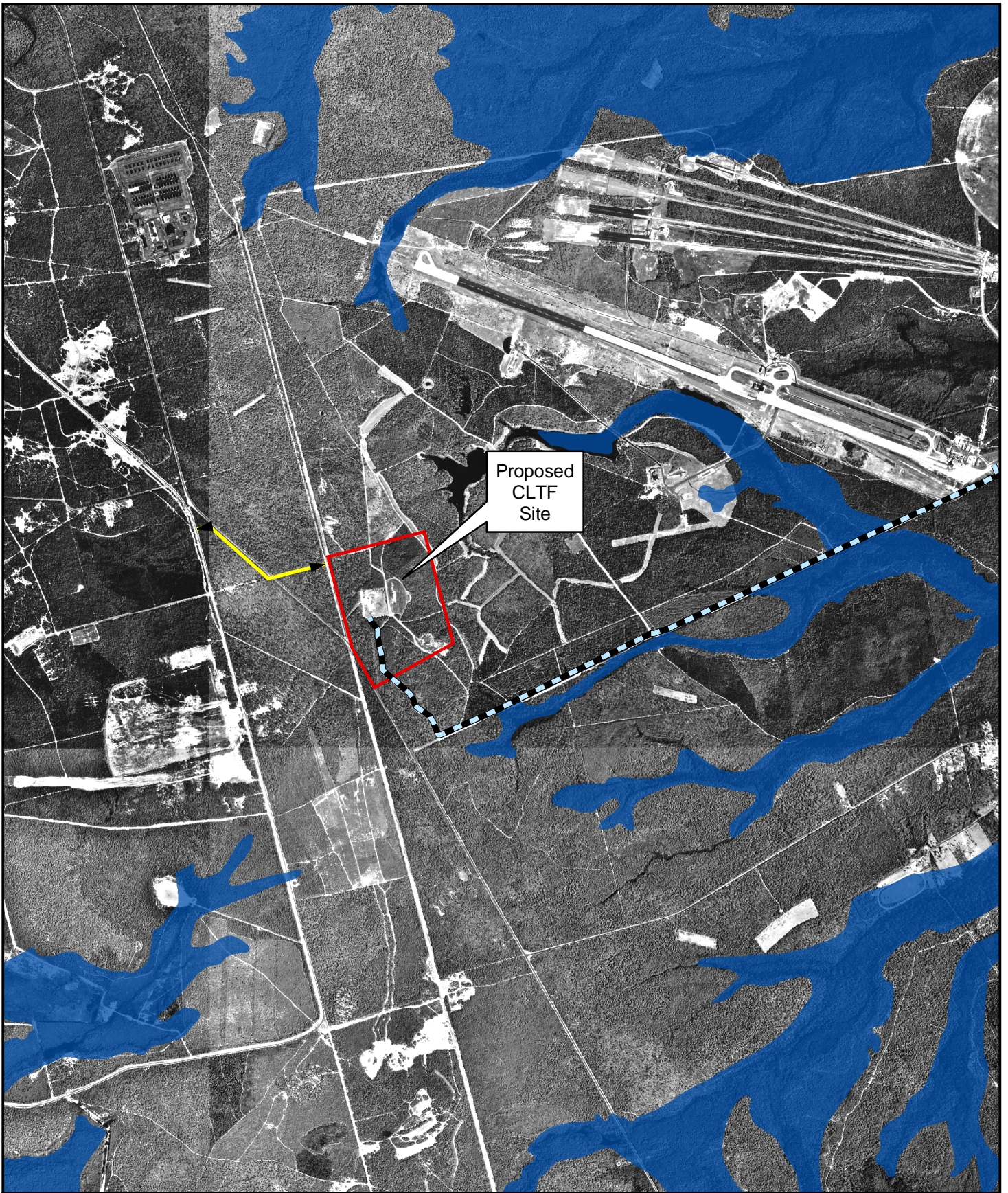
Figure 4-4
Drainage Map
Proposed CLTF at
Lakehurst NAES

Legend

- Drainage
- Site Location Boundary
- Proposed Gas Line
- Proposed Tank Trail

Project #27622-5085

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Legend





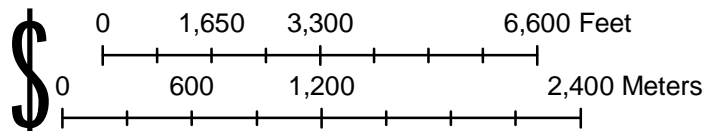
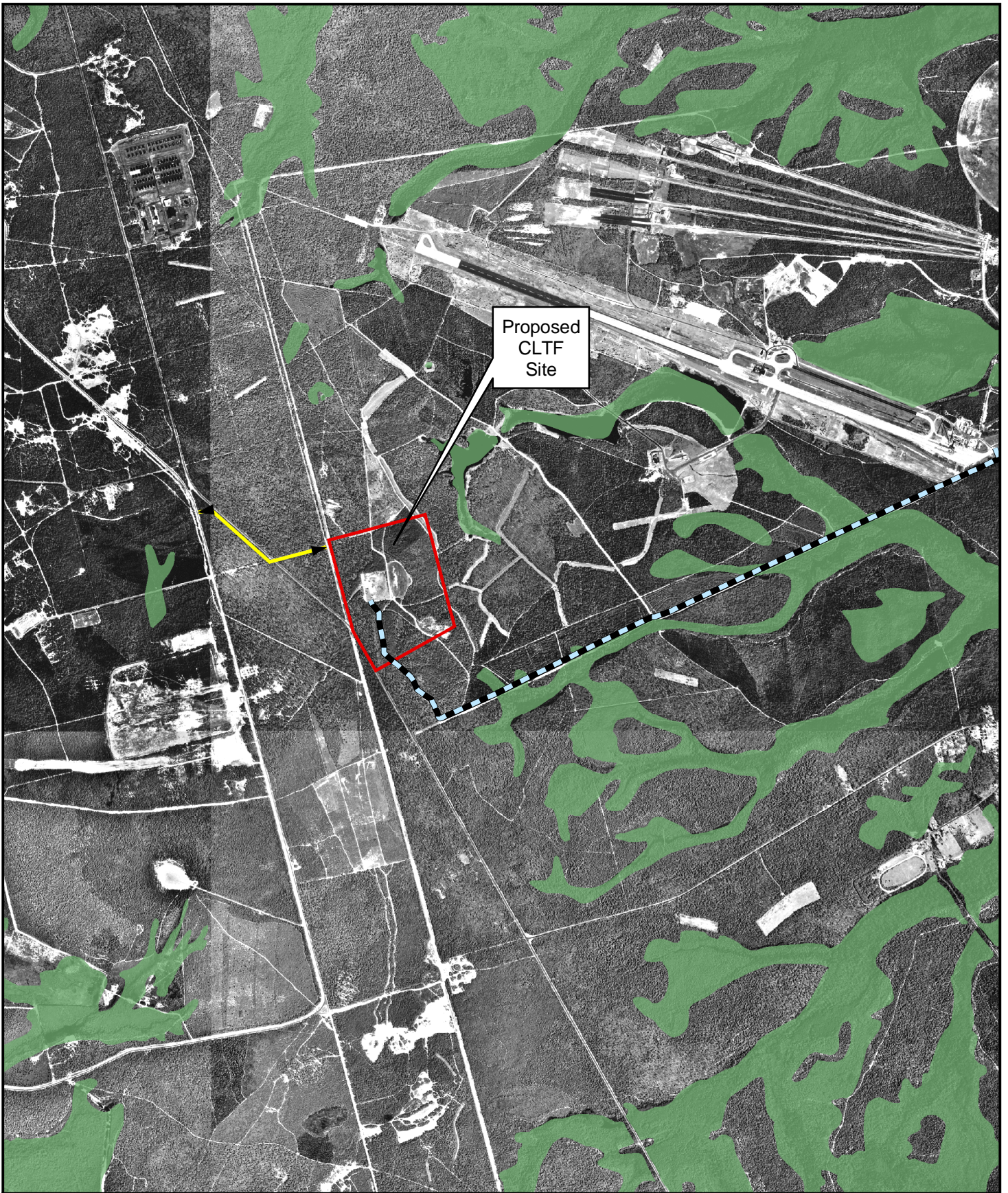
-  FEMA Floodplain
-  Site Location Boundary
-  Proposed Gas Line
-  Proposed Tank Trail

Figure 4-5
Floodplain Map
Proposed CLTF at
Lakehurst NAES

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Plymouth Meeting, PA 19462

Project #27622-5085



Legend

- NWI Wetland
- Site Location Boundary
- Proposed Gas Line
- Proposed Tank Trail

Project #27622-5085

Figure 4-6
NWI Map
Proposed CLTF at
Lakehurst NAES



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Plymouth Meeting, PA 19462



APPENDIX A

New Jersey Army National Guard Consolidated Logistics and Training Facility Alternative Sites Evaluation 22 February 2000



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Memo

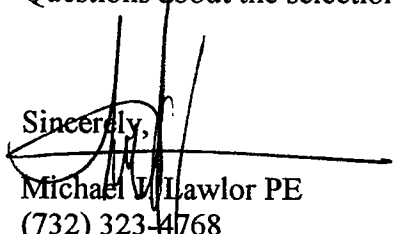
To: Col. Bertsch, NJARNG
From: Michael Lawlor, 8321
Date: April 6, 2001
Subj.: Alternate Site Selections at NAES Lakehurst

Col. Bertsch,

The enclosed documents are the summary of efforts at NAES Lakehurst to find suitable (alternate) sites for the construction of the proposed National Guard CL&TF. Though the site selection process did consider environmental impacts at the various sites, it did not include an environmental analysis of any site.

Questions about the selection process can be addressed directly to me, or to Mr. Kirkbright.

Sincerely,



Michael V. Lawlor PE
(732) 323-4768

Cc:

Mr. John Helbig, PP, AICP
Mr. Robert Kirkbright, PE (w/o encl.)
Mr. Tom Szallai

NEW JERSEY ARMY NATIONAL GUARD
CONSOLIDATED LOGISTICS AND TRAINING FACILITY
ALTERNATE SITES EVALUATION
SUMMARY OF DISCUSSIONS

On 23 Feb. the Business development office invited the following "consultants" to participate in the review of alternate sites for the NJARNG CL&TF to be located at NAES Lakehurst. The CL&TF was described to the consultants, as was the requirements of the site. On 29 Feb – 02 Mar 2000, the Business Development Office (Tom Szallai, Dave Marciniak and Mike Lawlor) met with those consultants who had comments or recommendations on the proposed sites.

<u>Name</u>	<u>Area of Concern</u>	<u>Attended</u>
Lucy Bottomley	Environmental	Yes (represented at discussions by Greg Bury)
John Joyce	Natural resources	Yes
Bernard Zuba	Traffic Engineering	Yes
Pat Breaux	Security	No
Cdr. Mueller	Air Ops	No
Steve Rudowski	Safety	Yes (w/ J. Mansberry & R. Strasser)
Pat Murphy	Quality of Life	Yes
Frank Crowe	Planning	Yes (w/ C. Allison & G. Resch)
Mauricio Borrero	Info Systems	No
Charlie Mink	PW	Yes

The input of the 'consultants' to the Alternate Selection Committee is summarized in the following report.

Site #1 - Eastfield

Environmental: Good site, must stay clear of wetland buffers. Small area is within the wellhead protection zone.

Natural Resources: Good location for the proposed facility, largely cleared and free of wetlands. No species negative impact.

Traffic: Good location for access by POV's, deliveries and other wheeled vehicles. Access to training sites by military vehicles is somewhat difficult, with a minimum of one bridge crossing (possible structural reinforcement required?).

Safety: Several current activities will have to be conducted elsewhere if this site is selected. The EVOC, Emergency Vehicle Operators Course, will be displaced. The

Suspect Ordnance holding area would also have to be redefined if this location is chosen. Work around solutions are available to solve both situations.

Planning: The proposed location at this site is directly adjacent to the soon to be constructed API laboratory. Further growth of the Navy's API mission at Lakehurst is limited if this site is dedicated to any other use. Concerns about the proximity also include noise and vibration disturbances in the Lab caused by the operation of tanks and other military vehicles.

SUMMARY: Site #1 was dismissed from further consideration due to the negative impact on the API mission of Navy Lakehurst.

Site #2 – Mooring Circles

Environmental: There is no significant environmental issue at the Mooring Circle site. A presence of wetlands will require that portions of the tract are avoided, otherwise the site is free of environment concerns

Natural Resources: Likewise, this site has little impact on the natural resources of the Base. Little forestation will be lost, and there are no known endangered or threatened species that will be impacted. Wetlands on the site will have to be considered in the construction of the proposed facility.

Traffic: This site offers excellent access for POV's, deliveries and other wheeled vehicle traffic from the main and commercial gates. A dedicated path for military vehicles to access the training sites at Ft Dix can be readily identified.

Safety: No significant issues

Planning: This site is within the 'historic district' of NAES. Though there is no prohibition of development at the site, NJ State historic Preservation Office review and approval will be required. The location of this site on existing paved Mat areas and sited between existing hangars makes it viable for the future expansion of aviation missions at NAES.

SUMMARY: This site is located in an area of potential expansion of Naval Missions at NAES, and is therefore removed from further consideration.

Site #3 – Building #342 Vicinity

Environmental / Natural Resources: This site is entirely wooded, requiring a large-scale deforestation. Additionally a significant amount of the site is lost to a wetland buffer.

Traffic: No significant issues.

Safety: A portion of this site is lost to the magazine QRD.

Planning: No significant issues

SUMMARY: This site is eliminated from further consideration as it is of inadequate size after the elimination of wetland buffer and QRD clearance requirements.

Site #4 – “Russian Ruins”

Environmental / Natural Resources: This site would require large-scale deforestation, as it is completely wooded.

Traffic: Site access is difficult for both military and non-military vehicles. Travel to the training sites along the north boundary of the base is difficult if not impossible due to wetland interference. Access for vehicles of all types would be required to go around the airfield.

Safety: Ordnance sweeps are required in this area.

Planning: This site falls within the Westfield AICUZ.

SUMMARY: This site has been eliminated from further consideration due to the deforestation requirements, and the difficulty of providing access to the site for military and non-military vehicles.

Site #5 – Jump Circle

Environmental: No significant issues

Natural Resources: There are numerous concerns about the disruption of natural resources in this area. Several threatened species of birds make this a nesting and breeding site. This is the single largest breeding site in NJ for at least one of these species.

Traffic: The site is remote from access points for non-military vehicles. A dedicated path for military vehicles to the training sites is easily defined.

Safety: Ordnance sweep is required in this area.

Planning: There is a significant amount of use of this facility in support of numerous military functions and operations. Development of this site would eliminate or greatly reduce the ability to use the jump circle to support these operations.

SUMMARY: This site has been eliminated from further consideration due to the impact on the natural resources of the site, and elimination of NAES's ability to support other military functions.

Site #6 – Borrow Area

Environmental: No significant issues

Natural Resources: No significant issues

Traffic: A dedicated military vehicle path to the training sites is easily defined. Non-military vehicle access is difficult, and may be further inhibited by testing operations at the Test Runway of the RSTS sites.

Safety: Ordnance sweep required in this area.

Planning: The location of this site is between the two major testing sites. Expansion of operations or facilities in either of these testing areas could be limited if there is significant development of this area.

SUMMARY: Due to the potential impact on the expansion of the testing mission at Navy Lakehurst, this site has been eliminated from further consideration.

Site #7 – Trenton Test Site

SUMMARY: This site was eliminated from further consideration before discussions began. As the site is still operational, development cannot be considered.

Site #8 – Building #551 and Vicinity

Environmental/Natural Resources: There is a vast amount of wetland surrounding and encroaching upon this site. Extent of these wetlands reduces the useable area to well under the requirement of the National Guard. Additionally, this is the largest breeding site for the threatened species Pine Snake, on the entire Base.

Traffic: No significant issues

Safety: No Significant issues

Planning: Occupants of Building #551 would have to be relocated to other facilities. The expense of this relocation, including the construction of replacement facilities would have to be the burden of the NJARNG. This would bring people and operations of this NAWCAD operation closer to the main area of the base.

SUMMARY: Due to the cited environmental / natural resource concerns, this site has been eliminated from consideration.

Site #9 – SATCOM Site

Environmental: There is neither potable water nor sanitary sewer available at this site, and permits will be required for the installation of wells and septic fields.

Natural Resources: No significant issues.

Traffic: No significant issues. All traffic would access this site directly from Ocean County Route 539, and would have no affect on NAES.

Safety: No significant issues

Planning: No significant issues.

SUMMARY: This site remains for consideration by the National Guard as a potential site for the CL&TF.

CL&TF Alternative Site Evaluations

- | | |
|--|-----------|
| 1. Prepare drawings | 07-11 Feb |
| 2. Prepare "consultants" package | 14 Feb |
| Introduction / description of NJARNG & CL&TF | |
| Map of all sites | |
| Map of individual sites-surface features only | |
| 3. Brief consultants on Site Selection (reasoning and process) | 15 Feb |
| 4. Interview "consultants" for feedback | 22-29 Feb |
| 5. Report to NAES with recommendation | 03 Mar |
| 6. Report to NJARNG QRB. | 15 Mar |

LAKEHURST CONSOLIDATED LOGISTIC TRAINING FACILITY

ALTERNATE SITE SELECTION CRITERIA

REQUIREMENTS FACT SHEET (September 1999)

1.	Total Square Footage of Project Footprint	2,000,000 SF
2.	Total Square Footage of Security Fenced Area	1,750,000 SF
3.	Number of Full Time Occupants	250
4.	Number of Part Time Occupants (Weekends)	250
5.	Total Number of Military Vehicles (Track, Wheel)	600
6.	Quantity of Potable Water Usage (Gallons/Month)	250,000 Gal/Month
7.	Quantity of Sanitary Sewer Discharge (Gallons/Month)	250,000 Gal/Month
8.	Quantity of Fire Suppression/Irrigation Water Storage (Gals)	Unknown at this time
9.	Quantity of Vehicle Diesel/JP8 Storage Capacity (Gallons)	20,000 Gal
10.	Quantity of Heating Oil Storage Capacity (Gallons)	20,000 Gal
11.	Electrical Loading (AMPS)	2,000 AMPS
12.	Quantity of Storm Water Discharge (Gallons/Year)	Unknown at this time
13.	Quantity of Vehicle Wash Water Discharge (Gal/Month)	None – Closed Loop Recycling

NOTE: All figures above are planning estimates only for the purpose of the Lakehurst alternate site selection process.

New Jersey
Army National Guard
Consolidated Logistics
and
Training Facility

Alternate Sites Evaluation
22 February 2000

NJARNG
Combined Logistics and Training Facility
Alternative Sites Evaluation

Introduction:

In 1998 the NAES offered to the New Jersey Army National Guard an area of land for the purpose of constructing a Consolidated Logistics and Training Facility. The Business Development Office, after initially offering NJARNG an 130 acre site on the Base's western border, is compelled to offer alternative sites for consideration. The BDO has prepared an initial slate of 9 sites, as indicated in figure #1. These sites will be studied for acceptability before being offered to the Guard for consideration.

Background:

The NJARNG will construct a CL&TF at the selected site on NAES Lakehurst. The facility will be used for the storage and maintenance of approximately 600 military vehicles, training and administration. All vehicles will be stored in covered sheds. All training will be done in classrooms or in static vehicles. All maneuvering and firing training will be conducted at Ft Dix.

Requirements:

The proposed facility, with vehicle access and parking and with contingency for future expansion, will require a site of approximately 100 acres. If the facility is to be located in a remote area where well and septic fields are required, an additional 30 acres will be required. The selected site must be separately fenced from other NAES facilities and activities

The selected site must provide for access by military and non-military vehicles, with a dedicated path for military vehicles to travel to and from Ft Dix. This dedicated path must not be by roads normally used by non-military vehicles.

Evaluations:

The Business Development Office has invited representatives from various Departments to assess the proposed sites in terms of their area of expertise. The following is a suggested list of topics that should be examined for each site:

Environmental:

- Wetlands buffer clearance
- Floodplain clearance
- Wellhead protection zone clearance
- Impact on threatened or endangered species
- Pinelands issues
- Water allocation
- Septic system

Natural Resources:

Feed plots interference
Animal Migration interference
Impact on threatened or endangered species

Traffic

Impact of additional traffic on NAES roads
Path of Military vehicles to Ft. Dix

Security

NAES perimeter security

Air Ops

Potential interference with airfield ops

Public Safety

Magazine QRD

Housing

Impact of proposed ops on on-base residents.

PW Planning:

Compliance with NAES Master Plan.

Information Management:

Availability of telephone / LAN services

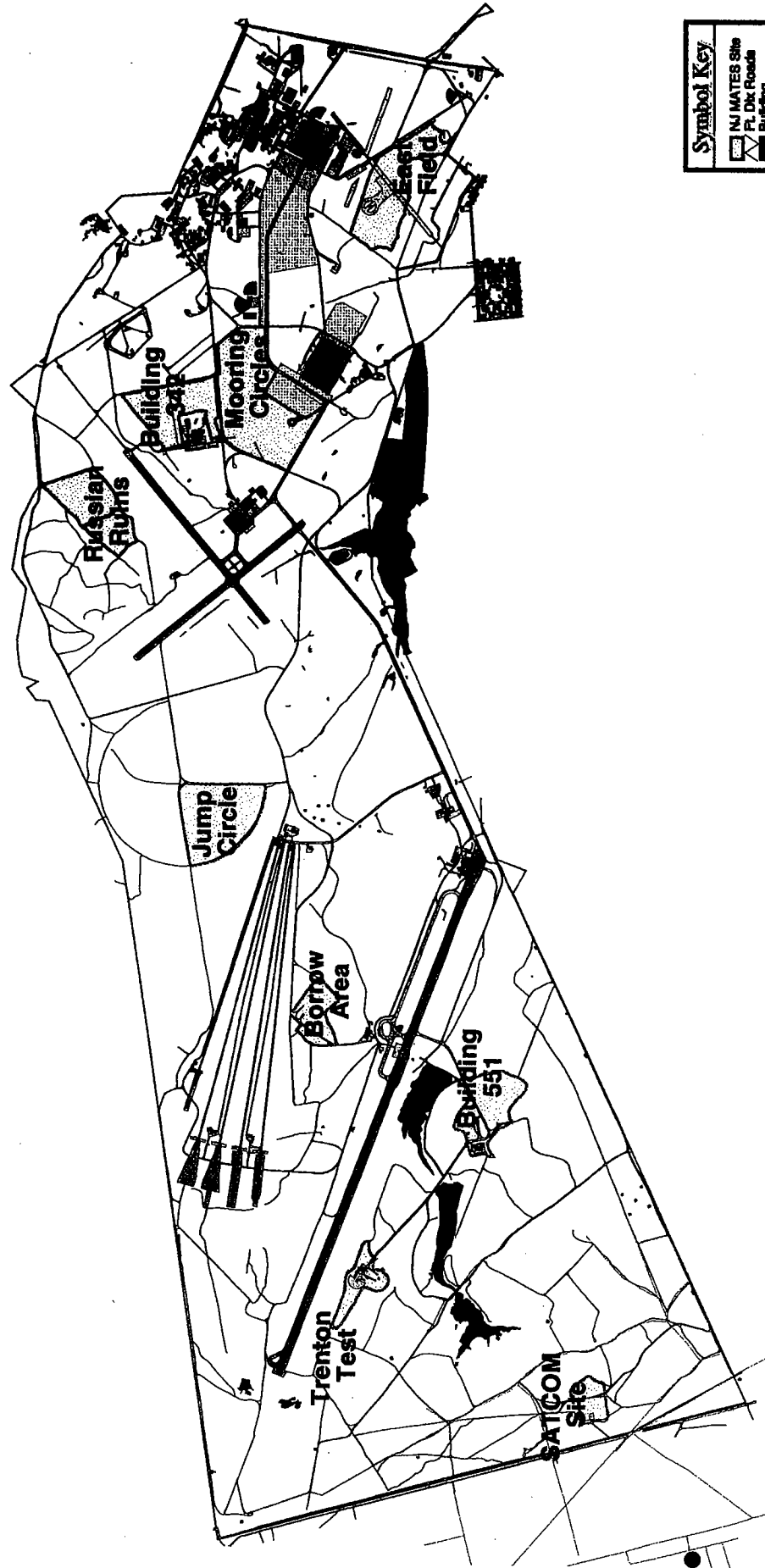
Utilities:

Availability of water, sewer, electric and natural gas services.

During the period of 29 Feb – 02 March, the BDO will meet with each of the Departments requested to provide input to the selection process. Each Dept shall be prepared at that time to present all pertinent info to the BDO. The composite of all of the input will be used to decide which sites are acceptable locations and which are not. Furthermore the info will be used to prioritize the acceptable sites in the order of preference for the NAES. The results of this effort will be used to determine at which site on the NAES the proposed facility will be constructed.

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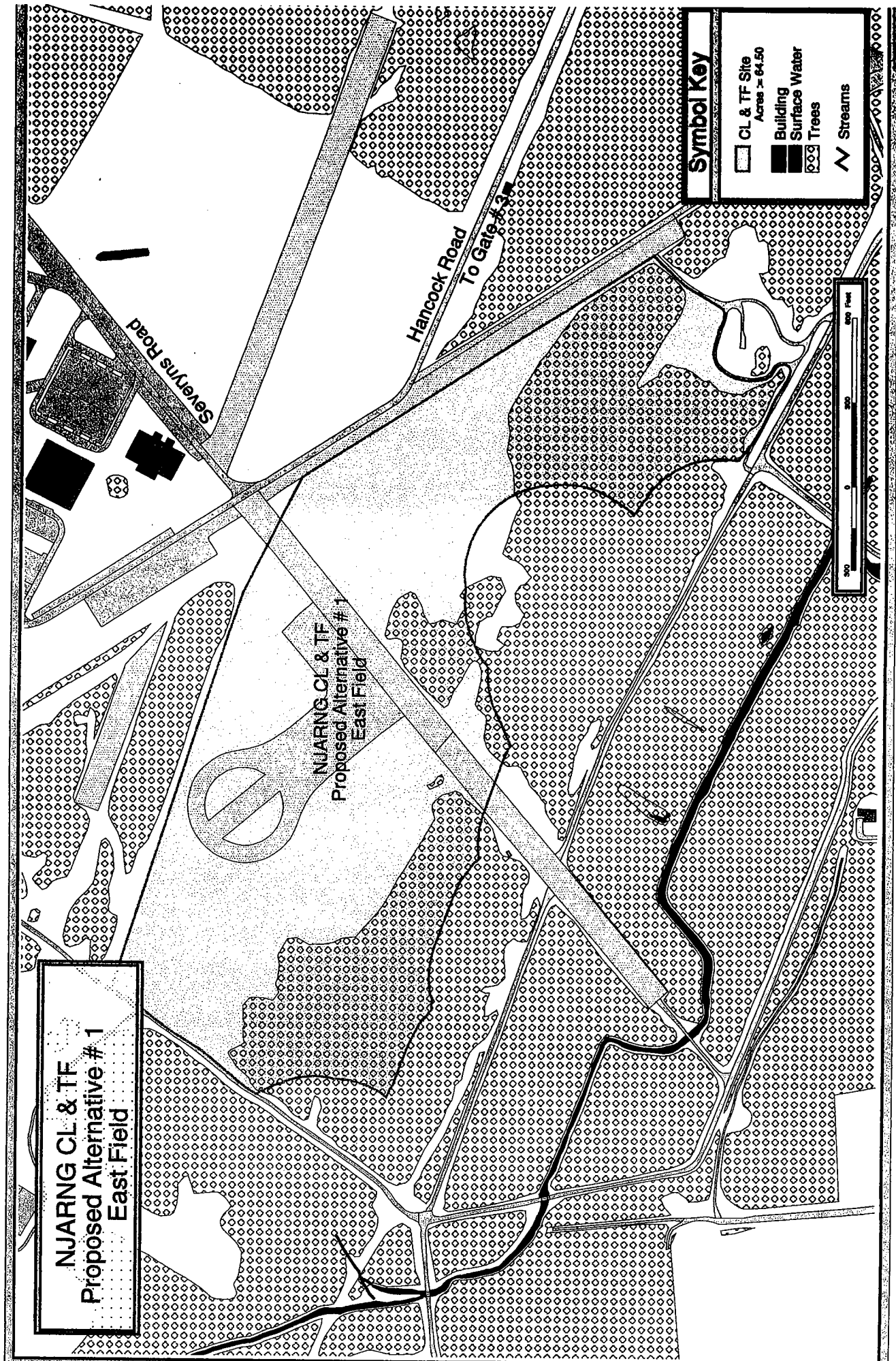
Consolidated Logistics and Training Facility Site Alternatives



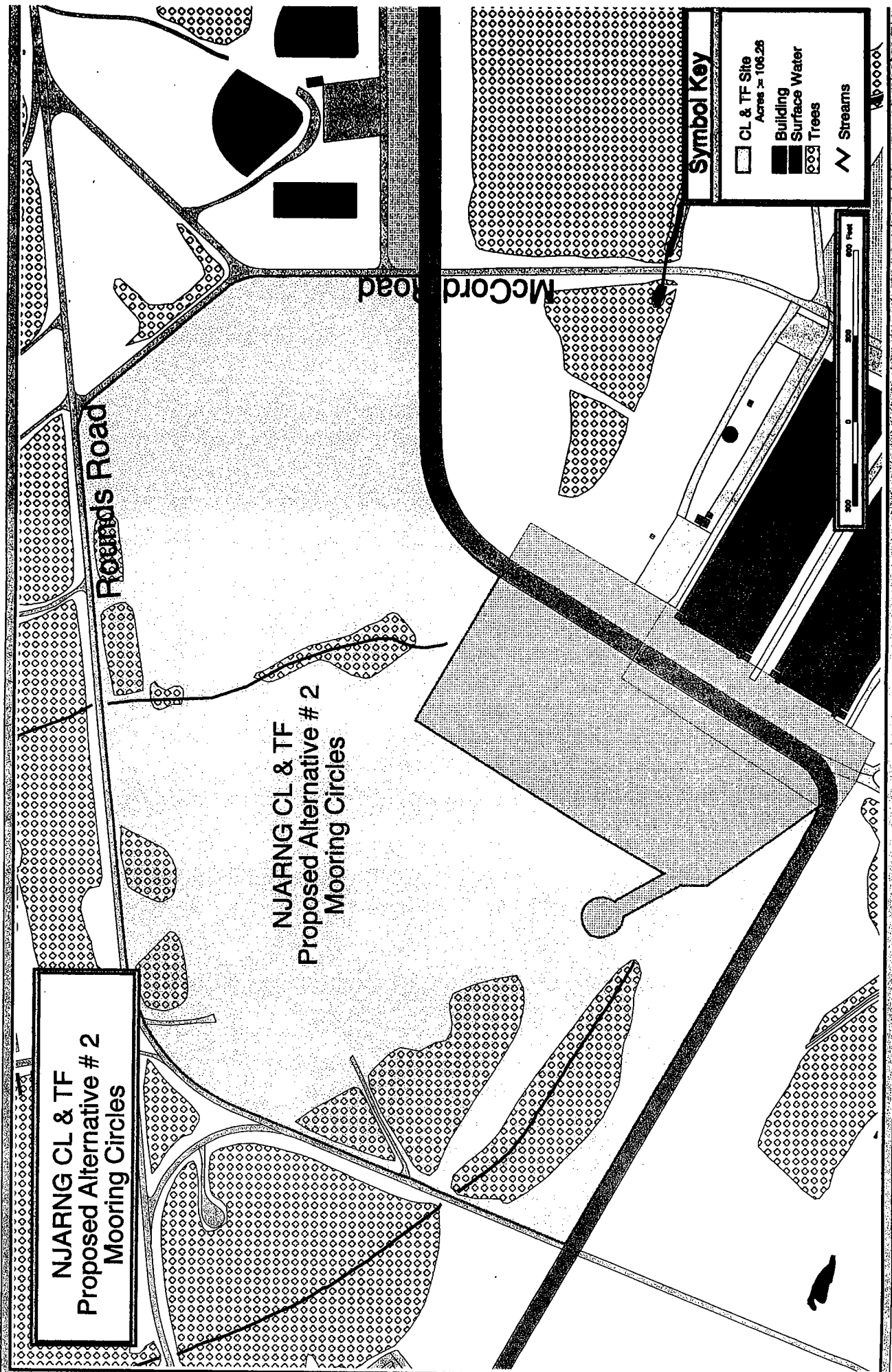
Symbol Key	
	NIMATES Site
	Pl. Dct. Road
	Building
	Surface Water
	NAEBS Boundary



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NJARNG CL & TF
Proposed Alternative # 2
Mooring Circles

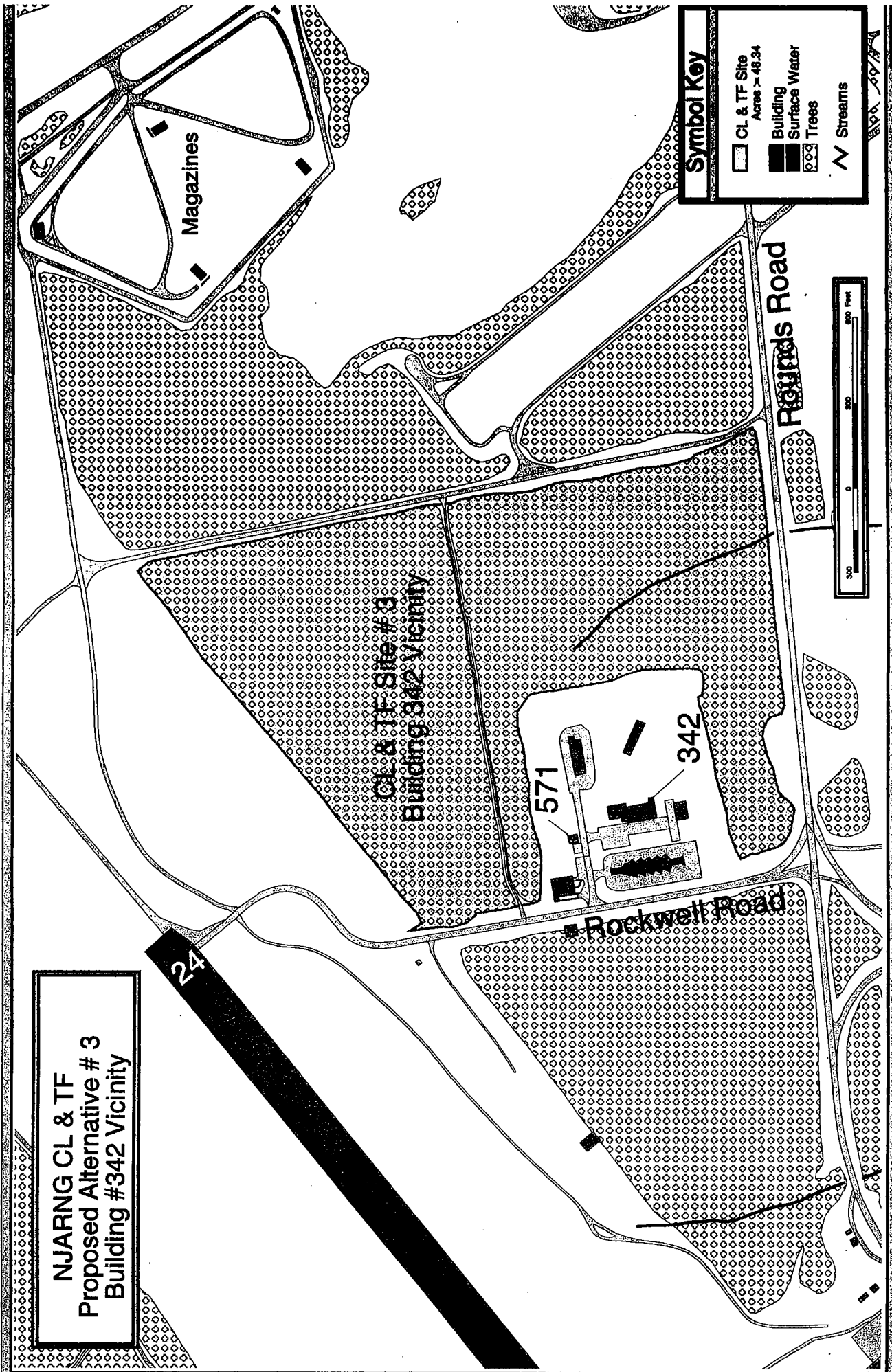
NJARNG CL & TF
Proposed Alternative # 2
Mooring Circles

Symbol Key

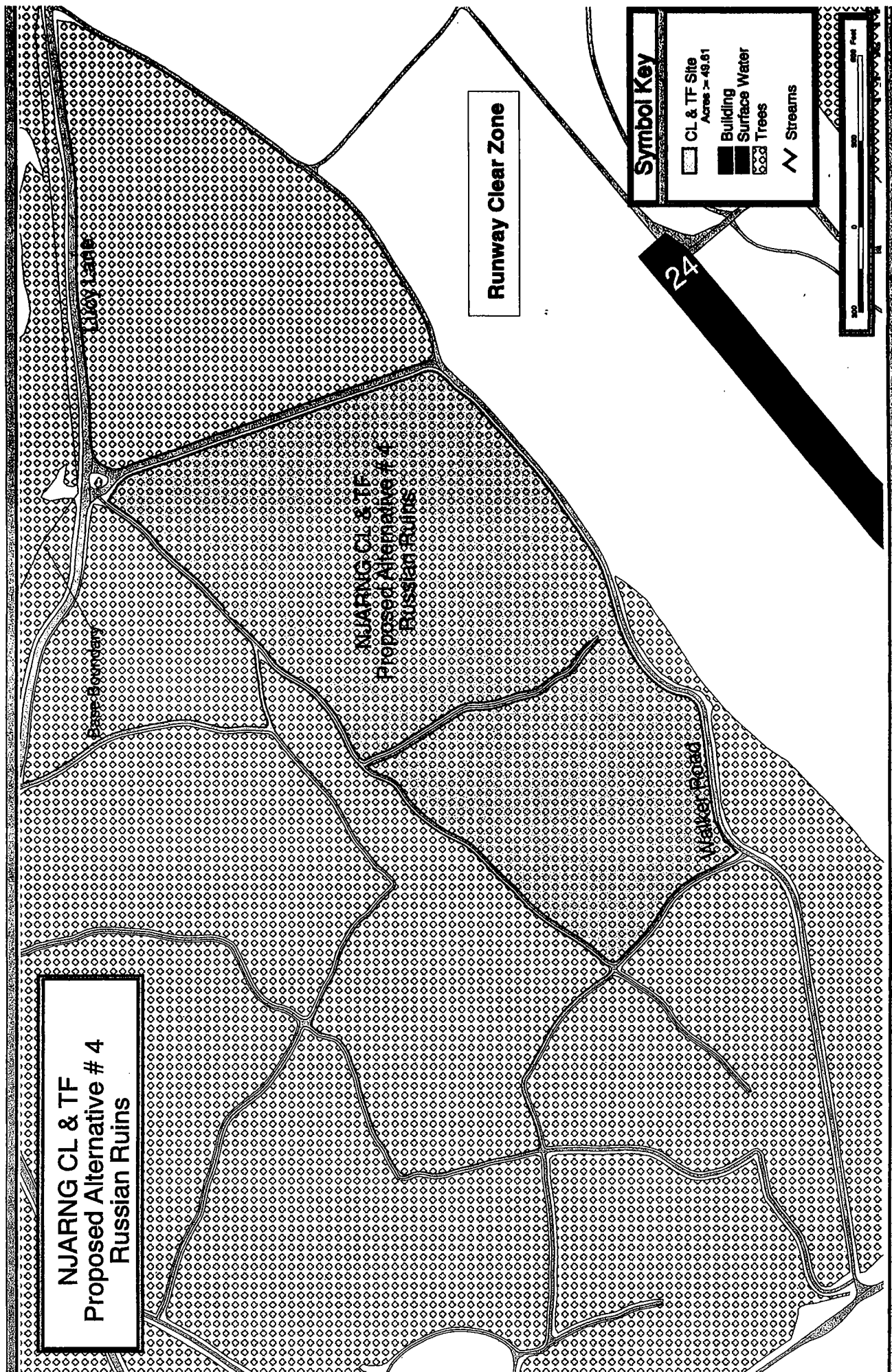
	CL & TF Site Acres = 106.26
	Building
	Surface Water
	Trees
	Streams



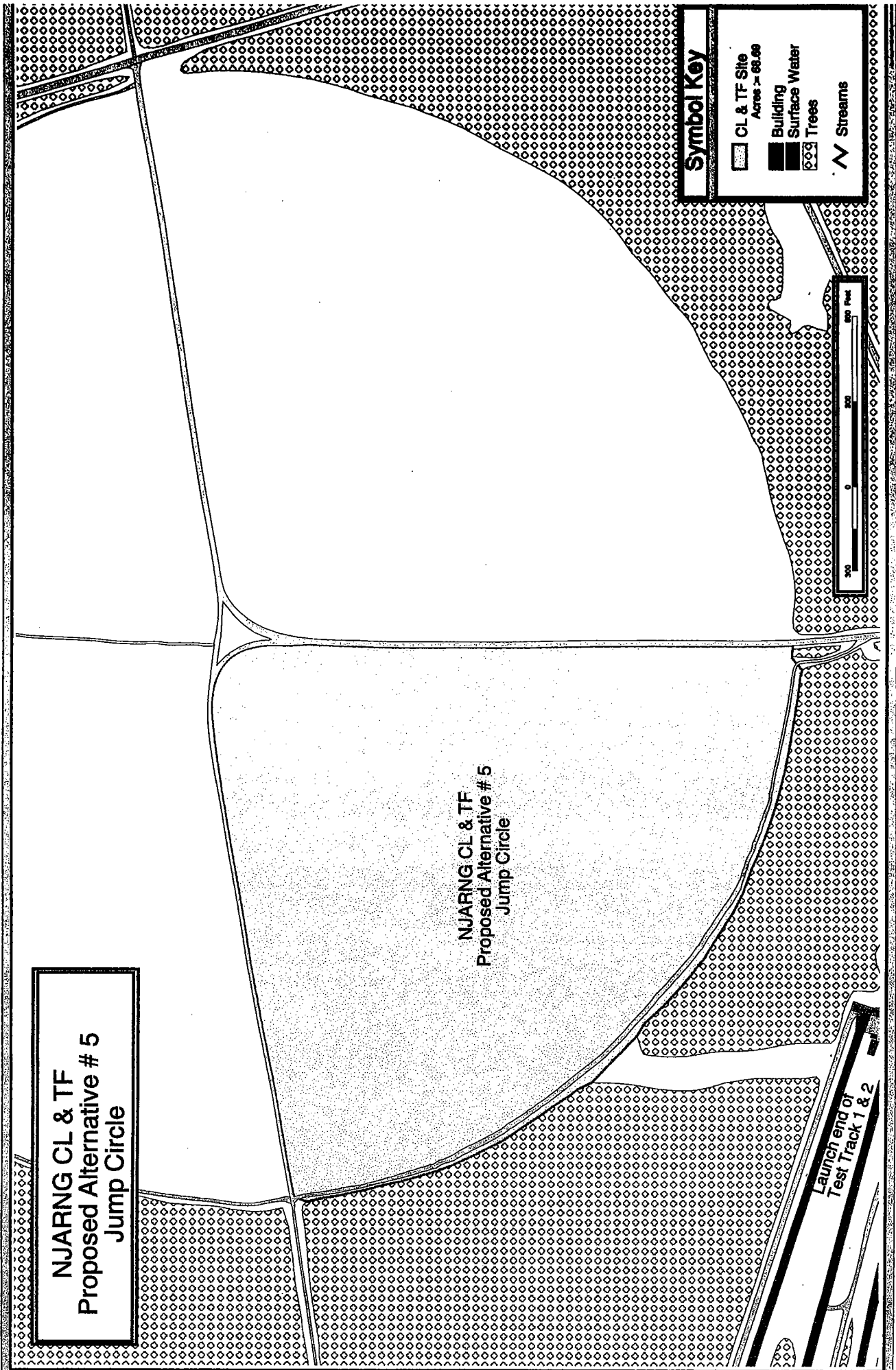
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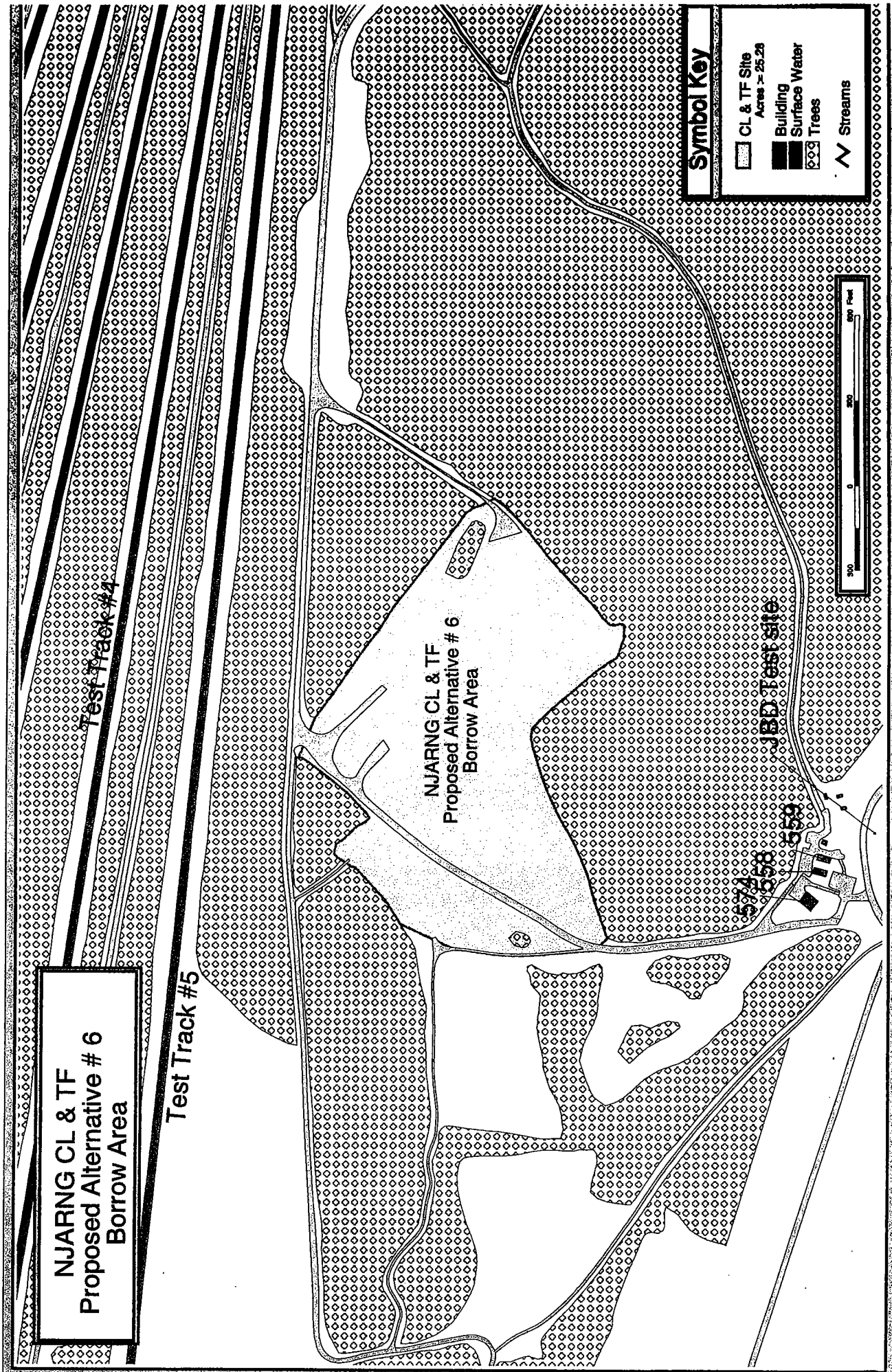
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NJARNG CL & TF
Proposed Alternative # 6
Borrow Area

Test Track #5

Test Track #4

NJARNG CL & TF
Proposed Alternative # 6
Borrow Area

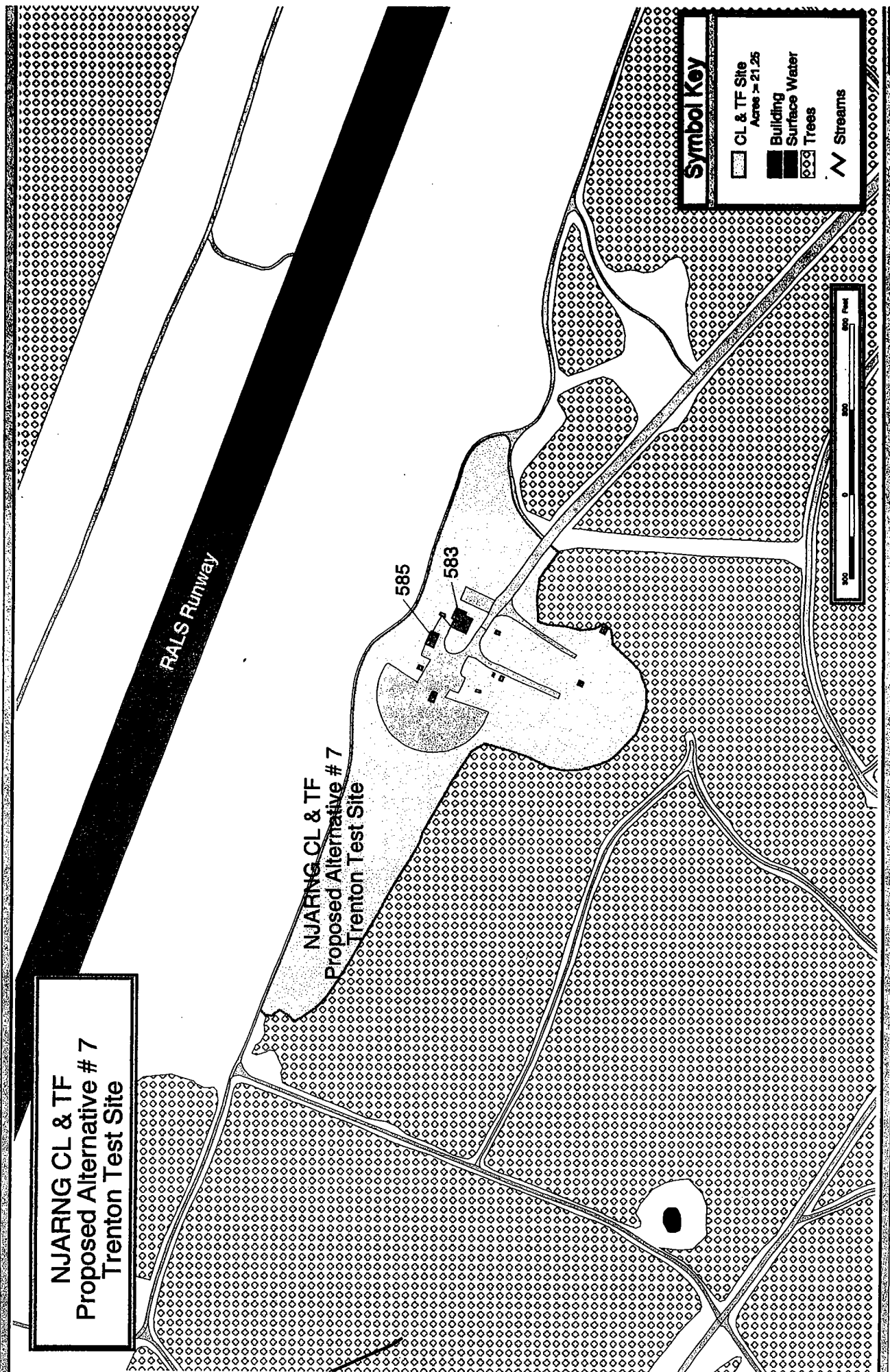
JBD Test Site

Symbol Key

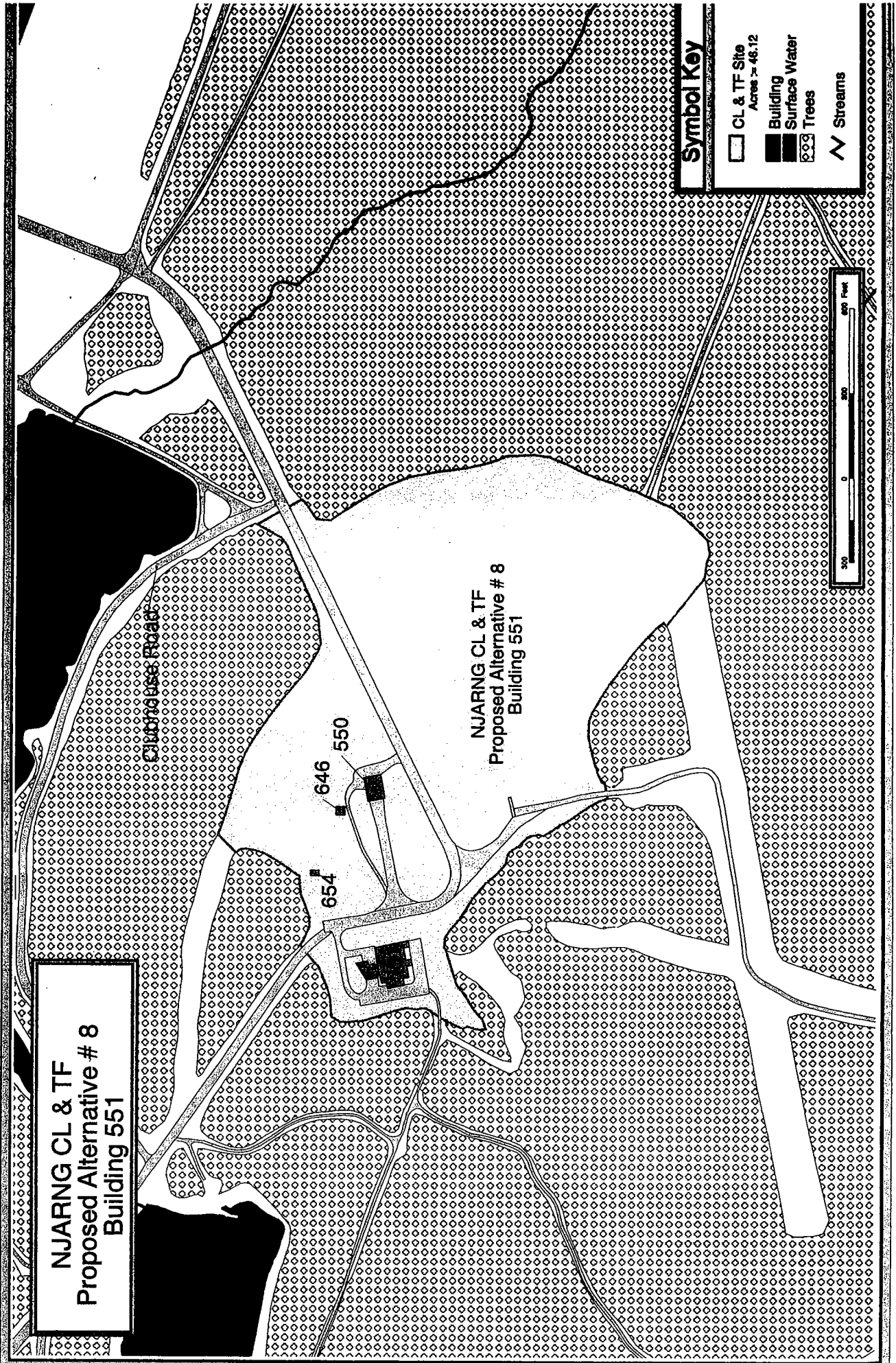
- CL & TF Site
Acres > 25.29
- Building
- Surface Water
- Trees
- Streams



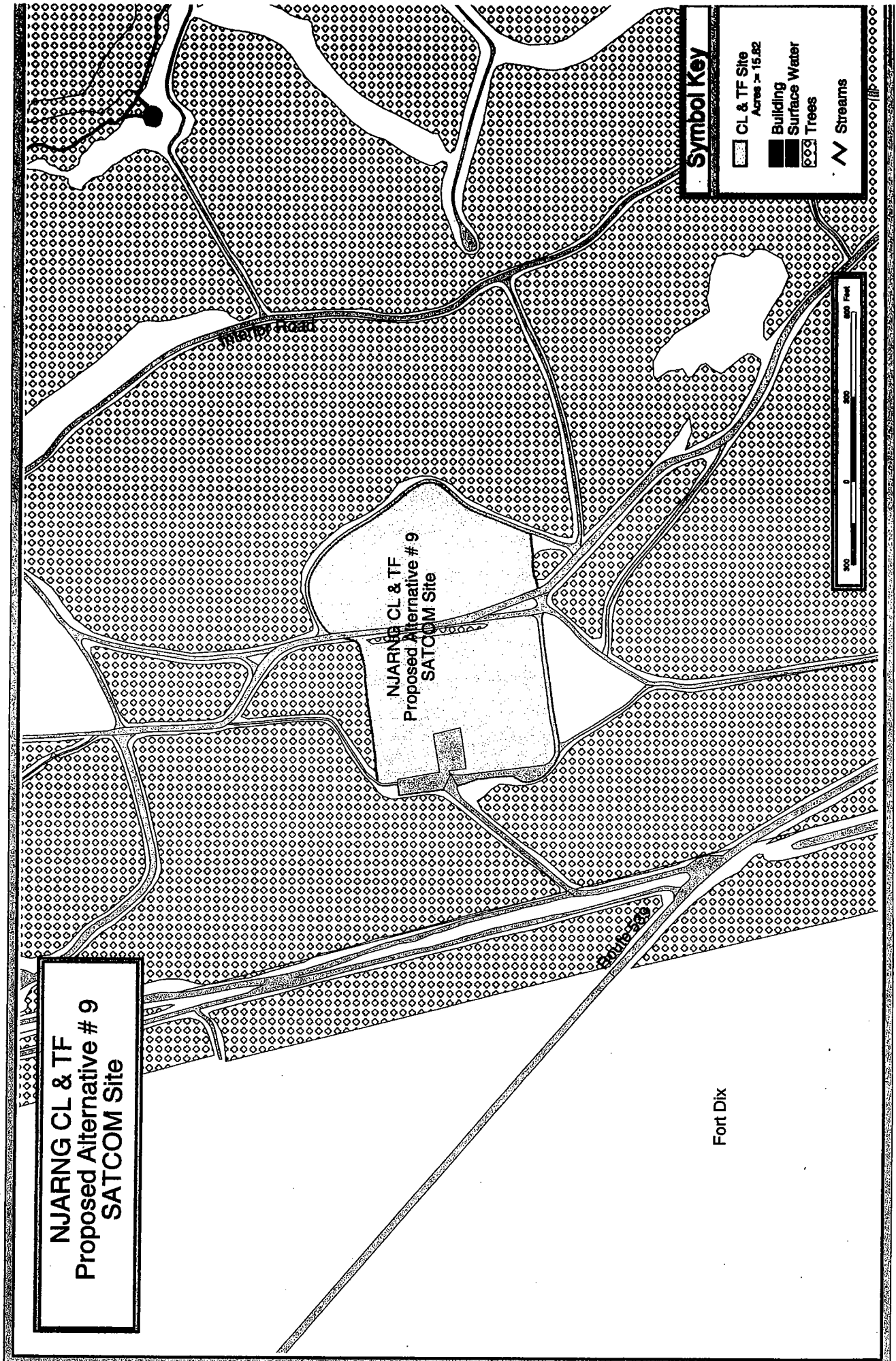
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-----Original Message-----

From: Blazak, Dennis CIV CNI N8L [mailto:dennis.blazak@navy.mil]

Sent: Wednesday, July 20, 2005 2:15 PM

To: Arrighi, Dean

Cc: Kon, Michael CIV CNRE, N8L; Lawlor, Michael CIV

Subject: CLTF EA Appendix A

Dean,

As per our discussion at the CLTF QRB this morning, the evaluation of alternatives, prepared by Mike Lawlor and sent to Colonel Bertsch on 6 April 2001, remains a valid analysis. It has not been overtaken by events nor do we have any significant changes to make to it.

Please advise if you require further clarification.

Dennis Blazak
Chief Environmental Engineer
Naval Air Engineering Station Lakehurst

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DEPARTMENT OF THE ARMY
HEADQUARTERS, FORT DIX
5417 ALABAMA AVENUE
FORT DIX, NEW JERSEY 08640-5000

AUG 23 2005

IMNE-DIX-PWM

MEMORANDUM FOR Headquarters New Jersey Army and Air National Guard, New Jersey Department of Military and Veterans' Affairs, COL Raymond Barnard, CFMO-NJARNG, 101 Eggert Crossing Road, Lawrenceville, New Jersey 08648-2805

SUBJECT: Availability of Land

1. During the 1995 – 1996 timeframe, the New Jersey Army National Guard (NJARNG) approached Fort Dix with the concept of constructing a Mobilization and Training Equipment Site (MATES) at Fort Dix. The project later became known as the NJARNG Consolidated Logistics and Training Facility (CLTF).
2. Recommendations/requirements were submitted to Fort Dix, with three sites offered to the NJARNG, none of which were selected. Thereafter the NJARNG chose another alternative to construct the CLTF.
3. As requested by the NJARNG, Fort Dix revisited the initial request for land, and has once again determined that there is no unutilized contiguous parcel of land sufficient in size to meet the NJARNG requirements for the construction of the CLTF.
4. For additional information pertaining to this action contact Jean M. Johnson, DPW Master Planning//Real Property, at (609) 562-3253/4249 or e-mail jean.johnson.2@dix.army.mil.


R. DAVID McNEIL
Colonel, IN 23 AUG 05
Commanding

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APPENDIX B

New Jersey Department of Military and Veterans Affairs - Owned Facilities



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APPENDIX B

New Jersey Department of Military and Veterans Affairs – Owned Facilities

<u>Location</u>	<u>Total Acreage</u>	<u>Grass (ft²)</u>	<u>Grass Acreage</u>
Atlantic City Readiness Center	3.92	48,000	1.1
Bordentown Readiness Center (Route 206)	10.88	27,200	0.6
Bordentown CSMS (Route 130)	14.87	237,600	5.5
Bridgeton Readiness Center	20.79	90,000	2.1
Burlington Readiness Center	1.08	17,200	0.4
Cape May Courthouse Readiness Center	21.00	490,000	11.3
Cherry Hill Readiness Center	9.40	238,900	7.6
Dover Readiness Center	16.00	97,800	2.3
East Orange Readiness Center	1.53	4,300	0.1
Flemington Readiness Center	12.87	68,800	1.6
Fort Dix Readiness Center	51.25	240,750	5.6
Fort Dix T3BL UTES		18,500	0.4
Franklin Readiness Center	10.00	180,000	4.2
Freehold Readiness Center	4.64	53,200	1.3
Hackettstown Readiness Center	15.65	50,200	1.2
Hammonton Readiness Center	10.00	78,000	1.8
Jersey City Readiness Center	1.80	2,640	0.1
Lawrenceville Readiness Center and DMVA	75.12	1,329,200	30.6
Lodi Readiness Center	4.50	31,000	0.7
Morristown Readiness Center	43.00	64,200	1.5
Mount Holly Readiness Center	6.00	207,400	4.8
Newark Readiness Center	1.77	880	0.1
Newton Readiness Center	6.00	55,000	1.3
Phillipsburg Readiness Center	6.75	111,660	2.6
Picatinny (AASF #2)	74.00	323,800	3.2
Pitman Readiness Center	8.00	52,550	1.2
Plainfield Readiness Center	2.00	23,400	0.6
Princeton Warehouse	8.10	70,000	1.6
Riverdale Readiness Center	6.88	28,400	0.7
Sea Girt National Guard Training Center (NGTC)	167.00	---	68.0
Somerset Readiness Center	20.70	165,800	3.8
Teaneck Readiness Center	13.66	201,000	4.6
Toms River Readiness Center	30.11	56,900	1.3
Tuckerton Readiness Center	15.55	32,180	0.8
Vineland Readiness Center	44.57	178,400	4.1
Washington (Port Murray) Readiness Center	17.00	236,800	5.5
Westfield Readiness Center	12.54	65,100	1.5
West Orange Readiness Center and CSMS	62.00	168,200	3.9
West Trenton - Mercer (AASF #1)	15.00	219,400	5.1
Woodbridge Readiness Center	4.29	37,900	0.9
Woodbury Readiness Center	4.64	63,900	1.5
Woodstown Readiness Center	8.00	108,200	2.5



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APPENDIX C

Agency Consultation Letters



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Interagency and Intergovernmental Coordination for Environmental Planning Contact List

GENERAL ENVIRONMENTAL AGENCIES

NJDEP, Department of Municipal Finance & Construction Element
Bureau of Construction & Connection Permits
Gautam Patel, Bureau Chief
401 East State Street, Floor 2
P.O. Box 029
Trenton, NJ 08625

NJDEP, Water Supply Element
Bureau of Water Allocation
Ms. Diane Zalaskus, Section Chief
401 East State Street
P.O. Box 426
Trenton, NJ 08625

NJDEP, Water Supply Element
Bureau of Safe Drinking Water
Vincent Monaco, PE, Section Chief
401 East State Street
P.O. Box 426
Trenton, NJ 08625

NJDEP, Division of Water Quality
Bureau of Watershed Management
Atlantic Coastal Bureau
David Rosenblatt, Chief
401 East State Street, 7th Floor
P.O. Box 418
Trenton, NJ 08625

NJDEP, Division of Water Quality
Bureau of Operational Groundwater Permits
Terry Pilawski, Supervisor
401 East State Street, 7th Floor
P.O. Box 401
Trenton, NJ 08625

U.S. Army Corps of Engineers
Philadelphia District
Regulatory Branch
Frank J. Cianfrani, Chief
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107



U.S. Environmental Protection Agency
Regional Administration - Region II
26 Federal Plaza
New York, NY 10278

NATURAL RESOURCES AGENCIES

New Jersey Pinelands Commission
Mr. Todd DeJesus, Mr. Ernest Demon
P.O. Box 7
New Lisbon, NJ 08064

The Pinelands Commission
Barry J. Brady, Ph.D.
Resource Planner
P.O. Box 7
New Lisbon, NJ 08064

The Pinelands Commission
Charles M. Homer
Director of Regulatory Programs
P.O. Box 7
New Lisbon, NJ 08064

U.S. Fish and Wildlife Service
New Jersey Field Office
Ecological Services
Building D-1
927 North Main Street
Pleasantville, NJ 08232

The following letter is an example of the IICEP letter sent to each Government Office and Agency listed above.



adams, rehmann & heggan
associates inc.

*reply to
hammonton*

May 15, 2001

CERTIFIED RETURN RECEIPT

Gautam Patel, Bureau Chief
Southern Region
NJDEP, Department of Municipal Finance & Construction Element
Bureau of Construction & Connection Permits
401 East State Street, Floor 2
PO Box 029
Trenton, NJ 08625-0029

Re: Proposed Consolidated Logistics and Training Facility (CLTF)
Applicant: New Jersey Department of Military and Veterans Affairs (DMAVA)
Lakehurst Naval Air Engineering Station (NAES) Site
Jackson Township, Ocean County
ARH #50-51449

Dear Mr. Patel:

As a component of a Preliminary Draft Environmental Assessment being compiled for the proposed facility, initial contacts with regulatory agencies having jurisdiction over the project are being completed.

While several potential siting options are currently being considered, the preferred alternative site comprises \pm 130 acres on the western portion of Lakehurst Naval Air Engineering Station in Jackson Township, Ocean County (see preferred alternative site location map attached).

With regard to the provision of both potable, as well as emergency water supplies, it is anticipated that, should this preferred alternative site be selected, an on-site supply well will be utilized along with some form of storage in either elevated or below grade storage tanks. This potential site is remote from the developed portion of the existing Lakehurst facility, and while an analysis of the technical and cost feasibility of extending water supply infrastructure from the main portion of the base is underway, it appears use of an on-site supply will be both technically feasible, as well as cost effective.

Currently, Lakehurst NAES maintains an active Water Diversion Permit (#5366) with the Bureau and monitors monthly and annual cumulative diversions in accordance with this permit. It is anticipated that this permit will need to be modified should the CLTF utilize the preferred alternative site, as well as any other potential location within the Lakehurst NAES complex.

At this point, it is anticipated that the facility will employ a full-time staff of ± 40 personnel with intermittent weekend and summer training exercises throughout the year. These exercises will result in up to several hundred additional personnel on-site during weekends and in two (2) week increments through the summer. In addition, the facility will incorporate vehicle washing provisions that will increase water use.

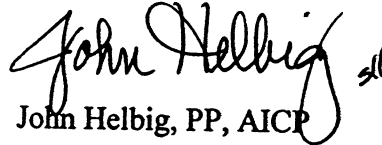
Based on these current assumptions, the provision of on-site primary and back-up supply wells each capable of obtaining a yield of ± 100 gpm with a calculated amount of static storage to address both peak utilization, as well as potential emergencies, appears prudent.

From a wastewater management perspective, one of the options currently being analyzed is to dispose of generated sanitary wastewater at the site of the proposed facility. We have preliminarily estimated peak wastewater flows between 2,000 and 6,000 gallons/day.

Based on this cursory facility description and preferred alternative location, what, if any, potential regulatory issues will need to be addressed in attempting to procure a TWA for discharge to groundwater for this site situated within the Pinelands Area, assuming the project receives approval from the Pinelands, as well as a draft NJPDES Permit for discharge to groundwater? Your anticipated cooperation is appreciated.

As this information is reviewed, please don't hesitate to contact me directly at (609) 561-0482 with any questions/comments.

Sincerely,



John Helbig, PP, AICP

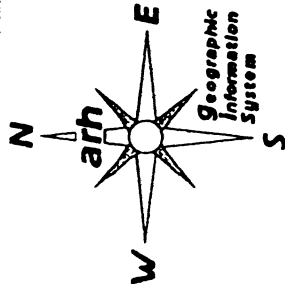
Enclosure: Location Map

cc: Dean L. Arrighi, Chief, Office of Environmental Compliance – NJDMVA
Robert K. Kirkbright, PE, Director of Engineering – Lakehurst NAES
Lucy S. Bottomley, Environmental Engineer, Lakehurst NAES

JH\ls//
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Civil Solutions
a division of ARH



County - Ocean
Township - Jackson

Blocks -
Lots -

Street Frontage - Rt 539

Drawn by: FEG Dated: 09/29/00

☐ Property In Question

☐ Municipal

☐ Ocean County Streams (as mapped by NJDEP)

☐ Ocean County Lakes (as mapped by NJDEP)

3000 0 3000 Feet



QUADRANGLE MAP

Cassville, NJ Quadrangle #098

Whiting, NJ Quadrangle #108

ARH Project # 00-0293

Note:

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

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The New Jersey Department of Environmental Protection
Office of Pollution Prevention and Permit Coordination
401 East State Street
P.O. Box 423
Trenton, New Jersey 08625-0423



CHARLES J. YANUCIL, III

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF POLLUTION PREVENTION
AND PERMIT COORDINATION
e-mail: cyanucil@dep.state.nj.us

PO BOX 423
TRENTON, NJ 08625-0423
TEL: (609) 292-3600
FAX: (609) 777-1330
www.state.nj.us/dep/opppc



**The New Jersey Department of Environmental Protection
Office of Pollution Prevention and Permit Coordination**

Permitting and Compliance Activities Coordinated Through a Single Point of Contact

Applicable for new development projects, existing facilities with multi-media impacts seeking permit renewals or modifications, and Brownfields redevelopment projects.

ONE STOP BENEFITS

- A single point of contact for all NJDEP related activities
- Upfront determination of all significant permits needed for the project
- Coordinated pre-application meetings with all appropriate regulatory programs
- Identification and resolution of potentially conflicting requirements
- Early opportunities to integrate pollution prevention concepts where appropriate
- Agreement on a critical permitting path and schedule for permit issuance
- Multi-media environmental overview site visit is conducted
- A coordinated, holistic approach to project management

NJDEP ONE STOP

P.O. Box 423, Trenton, N.J. 08625-0423
Phone: (609) 292-3600 Fax: (609) 777-1330



NJ DEP ONE STOP

The Office of Pollution Prevention and Permit Coordination was established in 1996 by Commissioner Robert C. Shinn, Jr. to improve service to permit applicants offering better communication, coordination of all permits required for a project and identification of pollution prevention opportunities early in the permitting process. The goal of the ONE STOP Process is to work closely with the regulated community to assure that the permits necessary for each project result in additional environmental value.

ONE STOP is a total facility approach to the permitting and compliance assistance process. A permittee can consult one source to identify all permits required for a development or significant facility expansion. This process will allow the Department to provide better service to the regulated community by maintaining consistent contact throughout the permitting process.

The Office provides assistance to those new construction, development and remediation projects which are complex in the number, variety and timing of permits required to initiate and complete their projects. A project team, comprised of permitting and compliance and enforcement staff, will review the applicant's proposal for the site, determine the required DEP permits, identify any additional pollution prevention measures that may reduce costs and improve the efficiency of the facility, and provide compliance assistance to new and existing facilities.

Once the permits are issued, an environmental overview document is

prepared which summarizes requirements for compliance monitoring, record keeping and reporting according to a designated compliance schedule. An environmental overview site visit is then conducted by the project team to provide multi-media compliance assistance. Regular inspections follow the initial environmental overview site visit.

ONE STOP Permitting & Compliance Process



New Jersey Department of
Environmental Protection
Office of Pollution Prevention
and Permit Coordination
ONE STOP Process
PO Box 423
Trenton, NJ 08625-0423
tel (609) 292-3600
fax (609) 777-1330



United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Jersey Field Office

Ecological Services

927 North Main Street, Building D

Pleasantville, New Jersey 08232

Tel: 609/646 9310

Fax: 609/646 0352

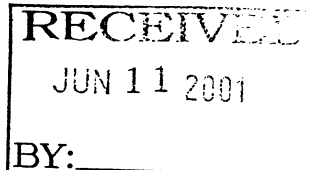
<http://njfieldoffice.fws.gov>



In Reply Refer to:

SP-01/34

June 8, 2001



John Helbig, PP, AICP
Adams, Rehmann & Heggan Associates, Inc.
850 South White Horse Pike
P.O. Box 579
Hammonton, New Jersey 08037-2019

Re: Proposed Consolidated Logistics and Training Facility (CLTF)
Lakehurst Naval Air Engineering Station (NAES) Site

Dear Mr. Helbig:

This responds to your May 14, 2001 letter to the U.S. Fish and Wildlife Service's (Service) New Jersey Field Office (NJFO) requesting information about regulatory issues that may arise from the construction of the referenced Consolidated Logistics and Training Facility (CLTF) in Jackson Township, Ocean County, New Jersey. The New Jersey Department of Military and Veterans Affairs (DMAVA) is proposing to construct a CLTF, with the preferred alternative site comprising approximately 130 acres on the western portion of Lakehurst Naval Air Engineering Station.

The DMAVA anticipates that the proposed CLTF will employ a full-time staff of approximately 40 personnel, with intermittent weekend and summer training exercises throughout the year. The training exercises will result in up to several hundred additional personnel on-site during weekends and in two-week increments through the summer. The DMAVA foresees the need for on-site primary and back-up wells to supply water to the proposed facility, with each well capable of obtaining a yield of approximately 100 gallons per minute. The DMAVA also estimates that the proposed facility will generate sanitary wastewater in the amount of 2,000 - 6,000 gallons per day.

AUTHORITY

This response is provided pursuant to Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) (ESA) to ensure the protection of federally listed endangered and threatened species. These comments do not address all Service concerns for fish and wildlife resources and do not preclude separate review and comments by the Service

pursuant to the December 22, 1993 Memorandum of Agreement among the U.S. Environmental Protection Agency, New Jersey Department of Environmental Protection (NJDEP), and the Service, if project implementation requires a permit from the NJDEP pursuant to the New Jersey Freshwater Wetlands Protection Act (N.J.S.A. 13:9B *et seq.*); nor do they preclude future comments pursuant to the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 703-712), or comments on any forthcoming environmental documents pursuant to the National Environmental Policy Act of 1969 as amended (83 Stat. 852; 42 U.S.C. 4321 *et seq.*).

FEDERALLY LISTED SPECIES

Potentially suitable habitat for the federally listed (threatened) plant, Knieskern's beaked-rush (*Rhynchospora knieskernii*) occurs on or in the vicinity of the proposed CLTF site. Knieskern's beaked-rush occurs in early successional wetland habitats, often on bog-iron substrate or mud deposits adjacent to slow-moving streams in the Pinelands region of New Jersey. This species is also found in human-disturbed wet areas including abandoned borrow pits, clay pits, ditches, rights-of-way, and unimproved roads. The species is intolerant of shade and competition, and is generally found on relatively bare substrate with sparse vegetation. Threats to Knieskern's beaked-rush include habitat loss from development, agriculture, hydrologic modification, and other wetland alterations; excessive disturbance from vehicle-use, trash dumping, and other activities; and natural vegetative succession of the open, sparsely-vegetated substrate preferred by this species.

Many areas of New Jersey, including the project site, have not been thoroughly surveyed for endangered and threatened plant and animal species. Therefore, occurrences of Knieskern's beaked-rush could be located within emergent wetlands or human-disturbed wet areas on or adjacent to the project site. If any such wetlands may be directly or indirectly affected by project activities, the Service requests that a qualified botanist with experience in sedge identification conduct a survey of the affected areas for the presence of Knieskern's beaked-rush. Survey guidance is enclosed. If the survey documents the presence of the species within the project site, an assessment of potential project impacts must also be completed. Project construction or implementation must not commence until the survey results and assessment of impacts have been forwarded to this office to determine if further consultation under Section 7 is required. The results of any survey, whether showing presence or absence, must be forwarded to this office for review. Please include the survey method used and the qualifications of the surveyor.

Except for the above mentioned species and an occasional transient bald eagle (*Haliaeetus leucocephalus*), no other federally listed or proposed threatened or endangered flora or fauna are known to occur within the vicinity of the proposed CLTF site. If additional information on federally listed endangered or threatened species becomes available, this determination may be reconsidered.

STATE-LISTED SPECIES

The State-listed (threatened) northern pine snake (*Pituophis melanoleucus melanoleucus*), has been documented adjacent to the project site. The northern pine snake occurs in open, human-disturbed pine and pine-oak forests and seems to prefer cleared fields or natural openings. Suitable habitat for northern pine snake occurs adjacent to the project site and may occur on-site. New Jersey State law (Endangered and Nongame Species Conservation Act of 1973, as amended, N.J.S.A. 23:2A *et seq.*) prohibits taking, possessing, transporting, exporting, processing, selling, or shipping listed species. "Take" is defined by the law as harassing, hunting, capturing, or killing, or attempting to do so. If field surveys are conducted at the project site, the Service recommends the survey also include the northern pine snake. Please contact the New Jersey Endangered and Nongame Species Program for additional information regarding northern pine snake, and its protection under State law (address enclosed).

WETLANDS

A review of the Service's National Wetland Inventory maps indicates that wetlands do not occur within the proposed CLTF site. However, small wetland areas may be present within the project site, but were not detected during National Wetland Inventory mapping. Wetlands provide habitats for a variety of migratory and resident species of fish and wildlife. Thus, the Service discourages activities in and affecting the Nation's wetlands that would unnecessarily damage, degrade, or destroy the values associated with them. Project activities in wetlands may require State permits from the New Jersey Department of Environmental Protection pursuant to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 *et seq.*). Thus, if work is proposed in wetlands, the following office must be contacted to determine State permit requirements:

Land Use Regulation Program
Department of Environmental Protection and Energy
CN 401
Trenton, New Jersey 08625-0401
(609) 292-1235
Fax #: Northern Counties (609-292-1231); Southern Counties (609-292-8115)

Enclosed is current information regarding federally listed and candidate species occurring in New Jersey, along with the addresses of State agencies that may be contacted for current site-specific information regarding federal candidate and State-listed species. We have also enclosed information on the federal endangered species program in New Jersey. Please contact Daniel Russell or Lisa Arroyo of my staff at (609) 646-9310, extensions 26 and 49 respectively, if you have any questions regarding the above comments. Thank you for the opportunity to review and comment on the project.

Sincerely,



Clifford G. Day
Supervisor

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FEDERAL CANDIDATE SPECIES IN NEW JERSEY

CANDIDATE SPECIES are species that appear to warrant consideration for addition to the federal List of Endangered and Threatened Wildlife and Plants. Although these species receive no substantive or procedural protection under the Endangered Species Act, the U.S. Fish and Wildlife Service encourages federal agencies and other planners to give consideration to these species in the environmental planning process.

SPECIES	SCIENTIFIC NAME
Bog asphodel	<i>Narthecium americanum</i>
Hirst's panic grass	<i>Panicum hirstii</i>

Note: For complete listings of taxa under review as candidate species, refer to Federal Register Vol. 64, No. 205, October 25, 1999 (Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species).

FEDERAL CANDIDATE AND STATE-LISTED SPECIES

Candidate species are species under consideration by the U.S. Fish and Wildlife Service (Service) for possible inclusion on the List of Endangered and Threatened Wildlife and Plants. Although these species receive no substantive or procedural protection under the Endangered Species Act, the Service encourages federal agencies and other planners to consider federal candidate species in project planning.

The New Jersey Natural Heritage Program maintains the most up-to-date information on federal candidate species and State-listed species in New Jersey and may be contacted at the following address:

Mr. Thomas Breden
Natural Heritage Program
Division of Parks and Forestry
P.O. Box 404
Trenton, New Jersey 08625
(609) 984-0097

Additionally, information on New Jersey's State-listed wildlife species may be obtained from the following office:

Dr. Larry Niles
Endangered and Nongame Species Program
Division of Fish and Wildlife
P.O. Box 400
Trenton, New Jersey 08625
(609) 292-9400

If information from either of the aforementioned sources reveals the presence of any federal candidate species within a project area, the Service should be contacted to ensure that these species are not adversely affected by project activities.



FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN NEW JERSEY



An **ENDANGERED** species is any species that is in danger of extinction throughout all or a significant portion of its range.

A **THREATENED** species is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

	COMMON NAME	SCIENTIFIC NAME	STATUS
FISHES	Shortnose sturgeon*	<i>Acipenser brevirostrum</i>	E
REPTILES	Hog turtle	<i>Clemmys muhlenbergii</i>	T
	Atlantic Ridley turtle*	<i>Lepidochelys kempii</i>	E
	Green turtle*	<i>Chelonia mydas</i>	T
	Hawksbill turtle*	<i>Eretmochelys imbricata</i>	E
	Leatherback turtle*	<i>Dermochelys coriacea</i>	E
	Loggerhead turtle*	<i>Caretta caretta</i>	T
BIRDS	Bald eagle	<i>Haliaeetus leucocephalus</i>	T
	Piping plover	<i>Charadrius melodus</i>	T
	Roseate spoon	<i>Sterna dougallii dougallii</i>	E
MAMMALS	Eastern cougar	<i>Felis concolor cougar</i>	E+
	Indiana bat	<i>Myotis sodalis</i>	E
	Gray wolf	<i>Canis lupus</i>	E+
	Delmarva fox squirrel	<i>Sciurus niger cinereus</i>	E+
	Blue whale*	<i>Balaenoptera musculus</i>	E
	Finback whale*	<i>Balaenoptera physalus</i>	E
	Humpback whale*	<i>Megaptera novaeangliae</i>	E
	Right whale*	<i>Balaena glacialis</i>	E
	Sei whale*	<i>Balaenoptera borealis</i>	E
	Sperm whale*	<i>Physeter macrocephalus</i>	E

Knieskern's beaked-rush

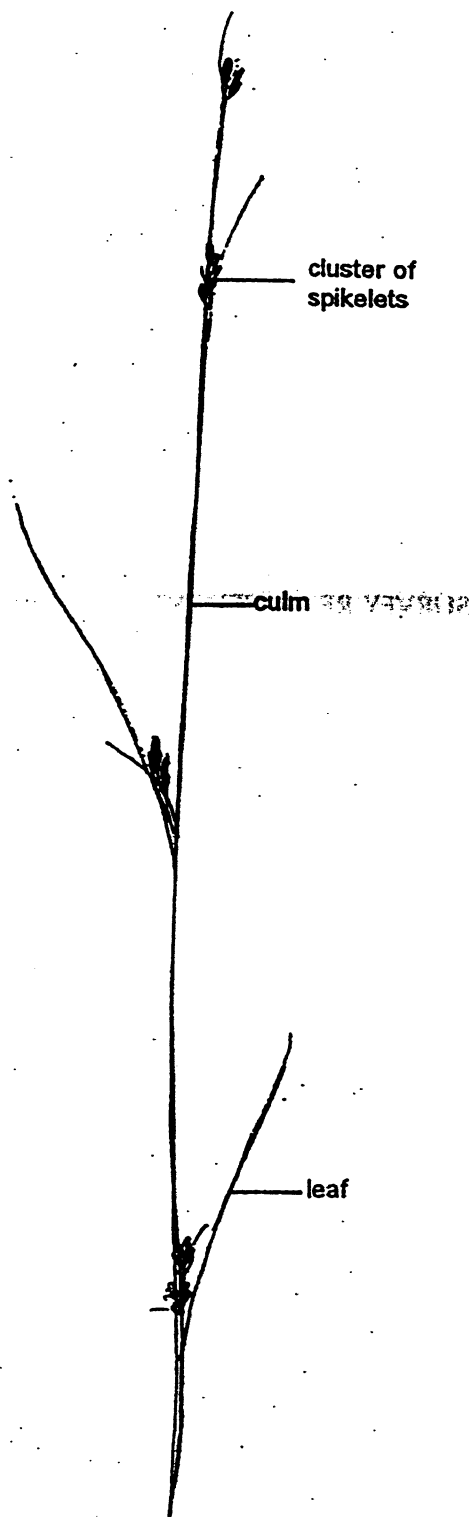
DESCRIPTION: Knieskern's beaked-rush (*Rhynchospora knieskernii*) was listed as a threatened species on July 18, 1991, pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Knieskern's beaked-rush belongs to the sedge family and is endemic to the Pinelands region of New Jersey. This grass-like plant was generally considered to be an annual species; however, it is currently suspected to be a short-lived perennial in locations where habitat conditions are stable, allowing uninterrupted growth year after year.

Knieskern's beaked-rush grows from 1.5 to 60 centimeters high (0.6 to 24 inches), has slender culms (stems) branching from the base, and short, narrowly linear leaves. Small spikelets (flower clusters) are numerous and occur at distant intervals along the entire length of the culm. The achene (fruit) is obovate, narrow at the base, 1.1 to 1.3 millimeters long (0.04 to 0.05 inches), and equal in length to the six downwardly-barbed or rarely, upwardly-barbed attached bristles.

Fruiting typically occurs from July to September (U.S. Fish and Wildlife Service, 1993).

HABITAT: Knieskern's beaked-rush is an obligate hydrophyte (wetland plant) that occurs in groundwater-influenced, constantly fluctuating, successional habitats. An early successional species and colonizer, Knieskern's beaked-rush is intolerant of competition, especially from woody species. It is found on naturally occurring early successional habitats and disturbed areas such as burns, bog-iron deposits, gravel and clay pits, road cuts, mowed roadsides, utility and railroad rights-of-way, cleared home sites, eroded areas, cleared edges of Atlantic white-cedar swamps, wheel ruts, and muddy swales (Gordon, 1993; U.S. Fish and Wildlife Service, 1993; Radis, 1995). In the past, fire may have played an important role in creating and maintaining suitable habitat for Knieskern's beaked-rush. Occurrence records indicate that this plant is found in wet open areas within fire-dependent open pitch-pine forests. Periodic disturbance, either natural or human-induced, which maintains a damp-to-wet site in an early ecological successional stage, may be necessary for the successful colonization, establishment, recruitment, and maintenance of this species.



Flowering / fruiting culm (stem)



State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Division of Parks and Forestry
Office of Natural Lands Management
Natural Heritage Program
P.O. Box 404

Trenton, NJ 08625-0404

Tel. #609-984-1339

Fax. #609-984-1427

Robert C. Shinn, Jr.
Commissioner

October 16, 2000

Kenneth D. Lechner
Adams, Rehmann and Heggan Associates, Inc.
850 S. White Horse Pike, PO Box 579
Hammonton, NJ 08037-2019

Re: Lakehurst Naval Air Engineering Station

Dear Mr. Lechner:

Thank you for your data request regarding rare species information for the above referenced project site in Jackson Township, Ocean County.

The Natural Heritage Data Base has a record for an occurrence of northern pine snake that may be on the site. The attached list provides more information about this occurrence. **Because some species are sensitive to disturbance or sought by collectors, this information is provided to you on the condition that no specific locational data are released to the general public. This is not intended to preclude your submission of this information to regulatory agencies from which you are seeking permits.**

Also attached is a list of rare species and natural communities that have been documented from Ocean County. This county list can be used as a master species list for directing further inventory work. If suitable habitat is present at the project site, these species have potential to be present. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend you contact the Division of Fish and Wildlife, Endangered and Nongame Species Program.

PLEASE SEE THE ATTACHED 'CAUTIONS AND RESTRICTIONS ON NHP DATA'.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

Thomas F. Breden
Supervisor

cc: Lawrence Niles
Thomas Hampton
NHP File No. 00-4007414

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State of New Jersey

Department of Environmental Protection

DONALD T. DiFRANCESCO
Acting Governor

Robert C. Shinn, Jr.
Commissioner

WATER SUPPLY ADMINISTRATION
P.O. Box 426
BUREAU OF WATER ALLOCATION
TRENTON, NEW JERSEY 08625-0426
TELEPHONE (609)292-2957
FAX (609)633-1231

June 19, 2001

Adams, Rehmann & Heggan Assoc., Inc.
850 South White Horse Pike
PO Box 579
Hammonton, NJ 08037-2019
Attn: John Helbig

RE: Proposed Consolidated Logistics Facility

Dear Mr. Helbig,

A major modification of your Water Allocation Permit is required for the additional diversion requirements explained in your letter dated May 10, 2001. Enclosed are an application, a copy of the Bureau of Water Allocation (Bureau) Regulations, and copies of the appropriate checklists, and guidelines. The highlighted checklist items need to be addressed in order to satisfy section N.J.A.C. 7:19-2.2 of the regulations. This section contains rules that specifically need to be satisfied to allow additional diversion sources.

An aquifer test is typically required for new diversion sources. The test is typically 72 hours in duration and is conducted in accordance with GSR-29 (copy enclosed). In this case the Bureau will accept the results of the test required by the Bureau of Safe Drinking Water provided it is monitored and analyzed in accordance with GSR-29.

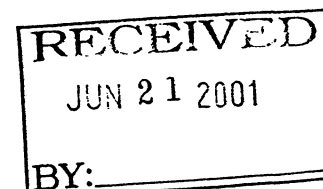
Should you have any questions regarding this letter or the enclosures, please contact Robert Hudgins at (609) 292-2957 or by e-mail at rhudgins@dep.state.nj.us.

Sincerely,

Jan Green
Bureau of Water Allocation

JG:bu

Enclosures



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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION
CN 426, Trenton, N.J. 08625-0426



PERMIT*

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to the further conditions and stipulations enumerated in the supporting documents.

Permit No. 5366	Issuance Date FEB - 7 1997	Effective Date FEB - 7 1997	Expiration Date March 31, 2006
Name and Address of Applicant Department of the Navy Naval Air Engineering Station Code 843230B5-2 Lakehurst, NJ 08733-5069		Location of Activity/Facility Manchester and Jackson Townships Ocean County	
		Type of Permit Water Allocation Diversion	Statute(s) N.J.S.A. 58:1A-1

This permit grants permission to:

Divert water from 22 existing permitted wells, 2 existing wells not previously permitted, and 4 proposed new wells, for a total of 28 wells. Eight wells are located in Manchester Township and twenty wells are located in Jackson Township, Ocean County.

This permit is subject to the following Specific and General Conditions:

A) WATER DIVERSION SOURCES

1. Water may be diverted under this modified permit for mixed potable, process, irrigation and miscellaneous uses from the following sources at the maximum rates specified below:

Groundwater

Well Permit No.	Well Name or Designation	Pump Capacity (gpm)	Aquifer
2902517	3	148	Cohansey
4900060	4	96	Cohansey
4900089	5	80	Cohansey
4900094	8	148	Cohansey

Page 1 of 5

Approved by the authority of:

Steven Nieswand, Administrator
Water Supply Element

Robert Oberthaler 2/7/97
Robert Oberthaler, Bureau Chief, Date
Bureau of Water Allocation

* The word permit means "approval, certification, registration, etc."

(GENERAL CONDITIONS ARE ON THE REVERSE SIDE.)

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State of New Jersey

THE PINELANDS COMMISSION

PO Box 7

NEW LISBON NJ 08064

(609) 894-7300

May 17, 2001

DONALD T. DiFRANCESCO
Acting Governor

John Helbig, PP, AICP
Adams, Rehmann & Heggan
850 South White Horse Pike
P.O. Box 579
Hammonton, NJ 08037-2019

Re: 91-0836.23
Jackson Twp
Ocean County
Lakehurst NAES

Dear John:

Thank you for your letter of April 30 inquiring as to the cultural resource potential for the development application referenced above. In response, I reviewed the application and the (Phase IA) cultural resource survey undertaken as part of the documentation for the proposed project. By the way, for your reference, our records indicate that the application number is 91-0836.23, not 91-0836.26.

While a definitive determination as to the need for additional survey work must await receipt of a site plan depicting the area which will be subject to development related impacts, it appears that most of the site has a fairly low potential for significant resources. The consultants who undertook the background documentary work have accurately identified the near-by resources that are listed in the Pinelands Commission inventories. However, the BOMARC site to the north has more recently been found to be eligible for the National Register. In any event, so long as development will be confined to those areas, it appears that I would not recommend that a survey be required.

I hope this information will be helpful to you as you finalize the project plans. Please feel free to call or write if you have any other questions.

Sincerely,

Barry J. Brady, Ph.D.
Resource Planner

c: Todd DeJesus



<http://www.state.nj.us/pinelands/>

E-mail: Info@njpines.state.nj.us

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State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection
Division of Parks & Forestry
Historic Preservation Office
PO Box 404

Trenton, N.J. 08625-0404

TEL: (609)292-2023

FAX: (609)984-0578

99-1937

HPO-H99-123

August 11, 1999

Robert C. Shinn, Jr.
Commissioner

Mr. Frank Kirby
Office of Environmental Compliance
Department of Military and Veterans Affairs
Post Office Box 340
Trenton, New Jersey 08625-0340

Dear Mr. Kirby:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR 800: Protection of Historic Properties, as published in the Federal Register 18 May 1999 (64 FR 27071-27084) I am providing Consultation Comments for the following project:

Ocean County, Lakehurst Borough
Lakehurst Naval Air Engineering Station
New Jersey Army National Guard (NJARNG)
Mobilization and Training Equipment Site (MATES)
U.S. Navy

800.4 Identification of Historic Properties

No resources listed in or eligible for inclusion in the National Register of Historic Places have been identified within the area slated for installation of the MATES Facility. Except for in the extreme southeastern corner of the study area (where potential for resources is moderate to high), potential for National Register eligible resources is very low.

800.5 Assessment of Adverse Effects

The installation of the MATES Facility will have no effect on resources on or eligible for inclusion in the National Register of Historic Places. This finding is based on avoidance of construction within the extreme southeastern corner of the study area identified as possessing high to moderate archaeological potential.

Additional Comments

This finding is based on the Cultural Resource Assessment for the MATES facility prepared by Sandy Steven and Mark Collins and on their recommendation for avoidance of the southeastern corner by the project. It a point in the future if it appears that avoidance is not possible, in keeping with the recommendations of the cultural resource consultants, Phase 1 archaeological survey of the high and moderated potential area (as identified in their report) should be undertaken, and Section 106 consultation with this Office re-initiated.

Thank you for providing this opportunity for review and Consultation. If you have any questions, please do not hesitate to contact Deborah Fimbel, staff reviewer for this project, at 609-984-6019.

Sincerely,



Dorothy P. Guzzo
Deputy State Historic
Preservation Officer

DPG:DRF



State of New Jersey

THE PINELANDS COMMISSION

PO Box 7

NEW LISBON NJ 08064

(609) 894-9342
XXXXXXXXXXXX
(609) 894-7300

CHRISTINE TODD WHITMAN
Governor

January 14, 2000

Mark Collins
Parsons Engineering Science, Inc.
10521 Rosenhaven Street
Fairfax, VA 22030

Please Always Refer To
This Application Number

Re: Application #91-0836.23
MATES
Lot Naval Air Engineering Station
Jackson Township

Dear Mr. Collins:

This is regarding the above referenced application for a proposed Military and Training Equipment Site (MATES) at the Lakehurst Naval Air Engineering Station.

As you are aware it will be necessary to complete an application with the Pinelands Commission for the proposed development. We have reviewed the July, 1999 Environmental Studies Report for the project site. At a minimum, the following additional information will be necessary to complete your application:

1. Fill out, sign, have notarized and return a Pinelands Comprehensive Management Plan's Application. If the applicant is not the owner of the property, the address and written consent of the owner must be submitted.
2. A copy of the legal notice that has been published in the official newspaper of the municipality in which the property is located (This should be completed once we have at least a preliminary set of site plans for the project).
3. As indicated in the report, and pursuant to N.J.A.C. 7:50-5.29(a)1, where feasible, development shall be located in that portion of the installation located within the Pinelands Protection Area. Please provide a detailed analysis to justify the location of the proposed development within the Preservation Area.
4. Threatened and Endangered Species - Please provide a complete Threatened and Endangered Species Report for the project area. The report should include all database

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E-mail: info@njpinelands.state.nj.us

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12. The results of a soil boring prepared by an engineer and taken at the location of each proposed septic system disposal bed. Submit one copy of the results with a plan showing location elevation and date of soil log, where ground water was encountered, and a specific estimation in feet and/or inches of the seasonal high water table (SHWT). The Pinelands CMP requires a minimum depth to SHWT of 5 feet when using a septic system.


NOTE: Although the Pinelands Commission no longer requires the results of a percolation (permeability) test, applicants are advised that it may be more cost effective to accomplish both the soil boring and percolation (permeability) test at the same time. It is suggested that applicants consult with their engineer concerning this issue.

13. Wetlands - A site inspection was conducted in July, 1999. The Commission staff concurs that there are no wetlands on the site. The off site wetlands were mapped accurately. You have indicated that you wish to apply for a Letter of Interpretation (LOI). Please note that an LOI is not required for this project. A Pinelands LOI is valid for 2 years. Additionally, pursuant to an agreement between the Pinelands Commission and the NJDEP, the Pinelands Commission has been designated as the lead agency for delineating the extent of freshwater wetlands in the Pinelands Area which are classified as waters of the United States. The delineation can be incorporated in the Letter of Interpretation to be issued by the Commission. Under the New Jersey Freshwater Wetlands Protection Act and the agreement between the Pinelands Commission and the NJDEP, this delineation will be binding upon the NJDEP for a period of 5 years. If you would like the Commission to incorporate this delineation into the LOI, please indicate this in writing. We will then inform you of the application requirements which include an application fee of \$250.00 plus \$35.00 per acre of any fraction thereof with a total not to exceed \$50,000.00. Please indicate how you wish to proceed regarding this.

Please be advised that this is a preliminary list. Once plans and supporting documents are submitted it may be necessary to provide additional information after they are reviewed. Please include your application number on any submitted information. Within 30 days of receipt, the Commission will review and respond in writing to any submitted information. No further review of the application will occur until the information requested in this letter is submitted.

If you have any questions, please contact the project review staff.

Sincerely,


Todd DeJesus
Environmental Specialist

cc: Frank Kirby



DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
WANAMAKER BUILDING, 100 PENN SQUARE EAST
PHILADELPHIA, PENNSYLVANIA 19107-3390

REPLY TO
ATTENTION OF

JUL 09 2001

Regulatory Branch
Application Section II

SUBJECT: CENAP-OP-R-200100917-24

Mr. John Helbig
Adams, Rehmann and Heggan
P. O. Box 579
Hammonton, New Jersey 08037-2019

Dear Mr. Helbig:

This is in response to your letter dated May 15, 2001, regarding a proposed Consolidated Logistics and Training Facility at the Lakehurst Naval Air Engineering Station in Jackson Township, Ocean County, New Jersey. Your letter included a location map, which showed the proposed location on the east side of Route 539.

Pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, a Department of the Army permit is required for work or structures in navigable waters of the United States and the discharge of dredged or fill material into waters of the United States including adjacent and isolated wetlands. Any proposal to perform the above activities within areas of Federal jurisdiction requires the prior approval of this office.

You did not provide any data or photographs, and a site inspection of the property was not made by this office. As such, no positive determination was made by this office on the presence or absence of wetlands or other waters. Under the terms of an agreement between the Corps and the New Jersey Department of Environmental Protection (NJDEP), that agency is the lead agency for establishing the limits of wetlands and waters for this property. Furthermore, the State of New Jersey has assumed the Corps' regulatory program for most freshwater wetlands, streams and other water bodies. Your site appears to be well above the head of tide of any tributaries to navigable waters of the U.S., and it is more than 1,000 feet from any water body which is subject to the ebb and flow of the tide. As such, you would deal solely with the NJDEP regarding any issues on freshwater wetlands or water bodies on this property.

This letter is issued in accordance with current Federal regulations and is based upon information provided by you in your submittal. If you should have any questions regarding this matter, please contact me at (215) 656-5826 or write to the above address.

Sincerely,

James N. Boyer, Ph.D.
Biologist

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State of New Jersey

THE PINELANDS COMMISSION

PO Box 7
NEW LISBON NJ 08064

(609) 894-7300

April 28, 2005

RICHARD J. CODEY
Acting Governor

JOHN C. STOKES
Executive Director

Dean Arrighi
New Jersey Department of Military & Veterans Affairs
101 Eggert Crossing Road
Lawrenceville, NJ 08648

Please Always Refer To
This Application Number

Re: Application #91-0836.23
CLTF
Naval Air Engineering Station
Jackson Township

Dear Mr. Arrighi:

We have received and reviewed the April 2005 Draft Environmental Assessment for the Construction and Operation of the Consolidated Logistics and Training Facility at the Lakehurst Naval Air Engineering Station.

The Commission previously issued a letter on March 4, 2004 indicting that the development of the Training Facility site would not have an irreversible adverse impact on habitats that are critical to the survival of any local population of Northern pine snakes.

The April 2005 Draft Environmental Assessment indicates that, in addition to the Training Facility site, improvements to approximately three miles of South Boundary Road and the installation of approximately 3.5 miles of a natural gas main are now proposed as part of the project. These improvements were not included in previous documents and have not been previously reviewed by our staff. It appears that the road improvements and gas main may be located within wetlands and/or wetland buffers. Depending on the extent of the proposed improvements to the South Boundary Road and the location of the proposed natural gas line, it may be necessary to address alternative routes for the road and gas main.

In addition, all proposed development must meet the threatened and endangered species standards of the Pinelands Comprehensive Management Plan (CMP). Although it was previously determined that the development of the Training Facility site would not have an irreversible adverse impact on habitats that are critical to the survival of any local populations of Northern pine snakes, it is unclear if the proposed improvements to the South Boundary Road and the installation of approximately 3.5 miles of a natural gas main are consistent with the Threatened and Endangered species standards of the CMP. The proposed road improvements and gas main appear to be routed through several areas of the Lakehurst Naval Air Engineering Station with Northern pine snake sightings reported by base personnel. If you wish to pursue the proposed road improvements and gas main installation, as currently proposed, please contact our office to schedule a meeting.

Please refer to our January 14, 2000 letter (enclosed) for the items necessary to complete the Training Facility site application. Please note that a cultural resource survey in accordance with the Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-6.155) and the Pinelands Cultural Resource Management Plan will be required. For further information regarding the survey requirements, please contact Dr. Barry Brady of our staff.

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E-mail: info@njpinelands.state.nj.us

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In addition to the information requested in our January 14, 2000 letter, please submit the following additional information for the proposed road improvements and gas main:

1. Please flag or otherwise clearly mark in the field the boundaries of the wetlands that are located on or within 300 feet of the proposed road improvements and gas main. Once the wetlands boundaries have been delineated, we suggest that you contact our office so that an on-site inspection of the wetlands line(s) can be completed by the Commission staff.
2. Since it appears that linear development will be located in wetlands and/or wetland buffers, N.J.A.C. 7:50-6.13 must be addressed. In addressing section N.J.A.C. 7:50-6.13 of the Pinelands Comprehensive Management Plan, it must be demonstrated that there are no feasible alternatives for the proposed development that will result in less wetland impacts.
3. A storm water management plan prepared by an appropriately licensed professional along with stormwater drainage calculations. The calculations must be provided utilizing the Soil Conservation Service Technical Release No.55, "Urban Hydrology for Small Watersheds." The calculations should demonstrate compliance with the following standards:
 - a. The total volume of runoff generated from any net increase in impervious surfaces by a 10 year storm of a 24 hour duration shall be retained and infiltrated on-site.
 - b. The peak rates of runoff generated by the parcel for a 2 year, 10 year and 100 year storm of a 24 hour duration shall not increase as a result of development of the site.
4. The results of a soil boring taken within each stormwater recharge area must be submitted. The bottom of all recharge facilities must be located an adequate distance (2 feet minimum) above the seasonal high water table. Provide a numerical estimation of the seasonal high water table.
5. Provide a description of a proposed maintenance and inspection program for the stormwater management system. Identify the party that will be responsible for the maintenance and inspections and include a schedule for these activities.

Please include your application number on any submitted information. Within 30 days of receipt, the Commission will review and respond in writing to any submitted information. No further review of the application will occur until the information requested in this letter is submitted.

If you have any questions, please contact the Regulatory Programs staff.

Sincerely,


Ernest M. Deman
Environmental Specialist

Enclosure: January 14, 2000 Letter

c: M.L. Bathrick
John C. Stokes
F:\Emie\wpdocs\83623a21.wpd



State of New Jersey

THE PINELANDS COMMISSION

PO Box 7

NEW LISBON NJ 08064

(609) 894-9342

XXXXXXXXXX
(609) 894-7300

CHRISTINE TODD WHITMAN
Governor

January 14, 2000

Mark Collins
Parsons Engineering Science, Inc.
10521 Rosenhaven Street
Fairfax, VA 22030

Please Always Refer To
This Application Number

Re: Application #91-0836.23
MATES
Lot Naval Air Engineering Station
Jackson Township

Dear Mr. Collins:

This is regarding the above referenced application for a proposed Military and Training Equipment Site (MATES) at the Lakehurst Naval Air Engineering Station.

As you are aware it will be necessary to complete an application with the Pinelands Commission for the proposed development. We have reviewed the July, 1999 Environmental Studies Report for the project site. At a minimum, the following additional information will be necessary to complete your application:

1. Fill out, sign, have notarized and return a Pinelands Comprehensive Management Plan's Application. If the applicant is not the owner of the property, the address and written consent of the owner must be submitted.
2. A copy of the legal notice that has been published in the official newspaper of the municipality in which the property is located (This should be completed once we have at least a preliminary set of site plans for the project).
3. As indicated in the report, and pursuant to N.J.A.C. 7:50-5.29(a)1, where feasible, development shall be located in that portion of the installation located within the Pinelands Protection Area. Please provide a detailed analysis to justify the location of the proposed development within the Preservation Area.
4. Threatened and Endangered Species - Please provide a complete Threatened and Endangered Species Report for the project area. The report should include all database

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12. The results of a soil boring prepared by an engineer and taken at the location of each proposed septic system disposal bed. Submit one copy of the results with a plan showing location elevation and date of soil log, where ground water was encountered, and a specific estimation in feet and/or inches of the seasonal high water table (SHWT). The Pinelands CMP requires a minimum depth to SHWT of 5 feet when using a septic system.

NOTE: Although the Pinelands Commission no longer requires the results of a percolation (permeability) test, applicants are advised that it may be more cost effective to accomplish both the soil boring and percolation (permeability) test at the same time. It is suggested that applicants consult with their engineer concerning this issue.

13. Wetlands - A site inspection was conducted in July, 1999. The Commission staff concurs that there are no wetlands on the site. The off site wetlands were mapped accurately. You have indicated that you wish to apply for a Letter of Interpretation (LOI). Please note that an LOI is not required for this project. A Pinelands LOI is valid for 2 years. Additionally, pursuant to an agreement between the Pinelands Commission and the NJDEP, the Pinelands Commission has been designated as the lead agency for delineating the extent of freshwater wetlands in the Pinelands Area which are classified as waters of the United States. The delineation can be incorporated in the Letter of Interpretation to be issued by the Commission. Under the New Jersey Freshwater Wetlands Protection Act and the agreement between the Pinelands Commission and the NJDEP, this delineation will be binding upon the NJDEP for a period of 5 years. If you would like the Commission to incorporate this delineation into the LOI, please indicate this in writing. We will then inform you of the application requirements which include an application fee of \$250.00 plus \$35.00 per acre of any fraction thereof with a total not to exceed \$50,000.00. Please indicate how you wish to proceed regarding this.

Please be advised that this is a preliminary list. Once plans and supporting documents are submitted it may be necessary to provide additional information after they are reviewed. Please include your application number on any submitted information. Within 30 days of receipt, the Commission will review and respond in writing to any submitted information. No further review of the application will occur until the information requested in this letter is submitted.

If you have any questions, please contact the project review staff.

Sincerely,



Todd DeJesus

Environmental Specialist

cc: Frank Kirby



State of New Jersey

THE PINELANDS COMMISSION

PO Box 7

NEW LISBON NJ 08064

(609) 894-7300

JAMES E. MCGREEVEY
Governor

JOHN C. STOKES
Executive Director

March 4, 2004

Dean Arrighi
New Jersey Department of Military & Veterans Affairs
101 Eggert Crossing Road
Lawrenceville, NJ 08648

Please Always Refer To
This Application Number

Re: Application #91-0836.23
CLTF
Naval Air Engineering Station
Jackson Township

Dear Mr. Arrighi:

I am writing to follow up on the January 14, 2004 meeting, of individuals with expertise pertaining to Northern pine snakes, that was held to review the Northern pine snake issue as it related to the development of a training facility at the Lakehurst Naval Air Engineering Station.

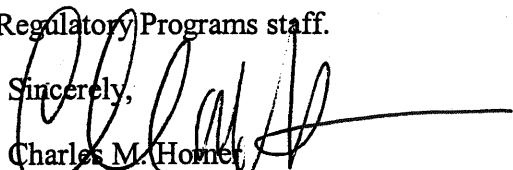
Based on the snake survey information previously submitted for this application, Commission staff review of the application and the opinions offered at the January 14, 2004 threatened and endangered species meeting regarding the proposed location of the training facility relative to the foundation, it has been concluded that the proposed development will not have an irreversible adverse impact on habitats that are critical to the survival of any local population of Northern pine snakes.

Please refer to our January 14, 2000 letter (enclosed) for the remaining items necessary to complete the application.

Please include your application number on any submitted information. Within 30 days of receipt, the Commission will review and respond in writing to any submitted information. No further review of the application will occur until the information requested in this letter is submitted.

If you have any questions, please contact the Regulatory Programs staff.

Sincerely,


Charles M. Horner
Director of Regulatory Programs

CMH/ED

Enclosure: January 14, 2000 Letter

c: M.L. Bathrick
John Helbig
Ernest Deman
F:\REGPROG\WPDOCS\LETTERS\83623m3.wpd

<http://www.state.nj.us/pinelands/>

E-mail: Info@njpines.state.nj.gov

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PINELANDS PRESERVATION ALLIANCE

Bishop Farmstead • 17 Pemberton Road • Southampton, New Jersey 08088

Phone: 609-859-8860

Fax: 609-859-8804

E-mail: ppa@pinelandsalliance.org

Website: www.pinelandsalliance.org

May 10, 2005

New Jersey Dept of Military & Veterans Affairs
Attn: Dean L. Arrighi, ID-OEC
101 Eggerts Crossing Road
Lawrenceville, NJ 08648-2805

Dear Mr. Arrighi:

The Pinelands Preservation Alliance (PPA) received the Draft Environmental Assessment Review in reference to the Lakehurst CLTF. Page iii states that these documents determine that an Environmental Impact Statement is not necessary for the implementation of Alternative 3. PPA disagrees because the Cumulative Impacts Associated with the proposed CLTF at Lakehurst Naval Air Station are not fully addressed in the Draft Assessment Review.

To date there has been no development on the western two-thirds of Lakehurst NAES and with this proposal the government is going to disturb some 110 acres for the fenced in portion of the proposal which is northern pine snake habitat, signalize Route 539, install a natural gas line that will impact wetlands in the North Ruckles Branch, install a water well in close vicinity of the BOMARC Missile site for water, pave of existing gravel roads and increase on-site hazardous and toxic materials. All this activity and development has impacts that are not addressed in the Environmental Assessment Review.

Although some of these items will be addressed by way of a Pinelands Commission Public Development Approval they will not get a cumulative impact review that an Environmental Impact Statement would provide.

We continue to be concerned that:

- There will be a loss of Northern Pine Snake habitat in the Pinelands Preservation Area of Lakehurst Naval Air Station. The continued "little bits" of lost habitat may have big impacts on this state threatened species. What will be the ongoing impacts with this additional activity in this portion of Lakehurst NAES? It was documented in the BOMARC cleanup activities

that the Northern Pine Snake utilizes the boundary roadway of Lakehurst NAES. What will be the impacts to the habitat due to the increase of traffic along this roadway?

- The June 8, 2001 letter from the United States Fish and Wildlife Service talks about the potentially suitable habitat for the federally listed plant, Knieskern's beaked-rush, but your report does not indicate if a survey was completed for this plant.
- What if any threatened and endangered plants exist downstream from the water well or installation of the natural gas pipeline? If so have you considered the impacts?
- The BOMARC missile site was identified as an area of environmental concern in 2003 to the CLTF site. (Section 4.12.7.2) Has the concern increased since it has been determined that the plume has been getting larger over the past several years? Has the concern increased since it has been determined by two additional surveys that plutonium contaminated soil exists outside the fenced-in area? What impacts do these new findings have on the CLTF site?
- What will be the environmental impacts associated with all the additional vehicle traffic on Route 539? This portion of Route 539 abuts the Manchester Wildlife Management Area. Manchester Township Planning Board has also approved a very large Shopping center to the south of the CLTF site in the Town of Whiting. Can this vehicle traffic mix in well with the additional military traffic?

Also I have one question pertaining to the April 2005 Relocation and Consolidation document. Page 1-3 states *"This proposed consolidation would achieve more efficient operation of the rotary wing aircraft, as well as bringing supported units closer to existing New Jersey training sites at Fort Dix, NAES Lakehurst, Warren Grove Range and **Brendan T. Byrne State Forest.**"* Where in the state forest does the military do training?

PPA hopes that these concerns might be addressed before the project proceeds.

Sincerely,



Theresa Lettman
Project Manager

cc: Charles Horner, Pinelands Commission



State of New Jersey

Department of Environmental Protection

Richard J. Codey
Acting Governor

Bradley M. Campbell
Commissioner

Environmental Regulation
Office of Pollution Prevention and Right To Know
401 E. State St., 3rd floor, Trenton, NJ 08625-0423
Tel.(609) 292-3600
Fax (609) 777-1330

May 11, 2005

Dean L. Arrighi, ID-OEC
New Jersey Department of Military and Veterans Affairs
101 Eggerts Crossing Road
Lawrenceville, NJ 08648-2805

RE: **Consolidated Logistics and Training Facility**
Lakehurst Naval Air Engineering Station
Jackson Township, Ocean County, New Jersey
Draft EA Comments

2005 MAY 17 AM 7 50

Dear Mr. Arrighi:

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) has completed its review of the Draft Environmental Assessment (EA) for the proposed construction and operation of the Consolidated Logistics and Training Facility at the Lakehurst Naval Air Engineering Station in Jackson Township, Ocean County, New Jersey. Marybeth Brenner, Director of our Department's Office Constituent Relations and Customer Services referred the Draft EA to our Office.

Our review concurs with the finding of the Draft EA that the proposed actions would have no significant adverse impacts on the environment provided noted permits/approvals from the NJDEP and the New Jersey Pinelands Commission are obtained, and proposed mitigated measures are implemented. The Draft EA notes that in regard to the State-listed endangered northern pine snake, impacts will be managed to less-than-significant levels through consultation with the New Jersey Pinelands Commission, the United States Fish and Wildlife Service and the NJDEP's Division of Fish, Game and Wildlife, to develop a mutually acceptable plan to minimize impacts. We support this consultation process.

The NJDEP also concurs that the Draft EA supports a Finding of No Significant Impact (FONSI). Thank you for the opportunity to review the Draft Environmental Assessment.

Sincerely,



Kenneth C. Koschek
Supervising Environmental Specialist
Office of Permit Coordination
and Environmental Review

C: Marybeth Brenner, NJDEP

RECEIVED
STANDARD
2005 MAY 17 AM 7 50



In Reply Refer to:

ES-05/122

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Jersey Field Office
Ecological Services
927 North Main Street, Building D
Pleasantville, New Jersey 08232
Tel: 609/646 9310
Fax: 609/646 0352
<http://njfieldoffice.fws.gov>



JUN 07 2005

New Jersey Department of Military and Veterans Affairs
ATTN: Dean L. Arrighi, ID-OEC
101 Eggerts Crossing Road
Lawrenceville, New Jersey 08648

Dear Mr. Arrighi:

This responds to your April 11, 2005 request to the U.S. Fish and Wildlife Service (Service) for review and comments regarding the Lakehurst Consolidated Logistics and Training Facility Draft Environmental Assessment (Lakehurst CLTF Draft EA) proposed at the Lakehurst Naval Air Engineering Station, Jackson Township, Ocean County, New Jersey.

AUTHORITY

This response is provided pursuant to Section 7 of the ESA to ensure the protection of federally listed endangered and threatened species. These comments do not address all Service concerns for fish and wildlife resources and do not preclude separate review and comments by the Service pursuant to the December 22, 1993 Memorandum of Agreement among the U.S. Environmental Protection Agency, New Jersey Department of Environmental Protection (NJDEP), and the Service, if project implementation requires a permit from the NJDEP pursuant to the New Jersey Freshwater Wetlands Protection Act (N.J.S.A. 13:9B *et seq.*); nor do they preclude future comments pursuant to the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 703-712), or comments on any forthcoming environmental documents pursuant to the National Environmental Policy Act of 1969 as amended (83 Stat. 852; 42 U.S.C. 4321 *et seq.*).

FEDERALLY LISTED SPECIES

The Service previously reviewed the proposed project in a letter dated June 8, 2001 and recommended a survey to determine the presence or absence of Knieskern's beaked-rush (*Rhynchospora knieskernii*). Knieskern's beaked-rush is a plant that is federally listed as threatened and occurs in early successional wetland habitats, often on bog-iron substrate or mud deposits adjacent to slow-moving streams in the Pine Barrens region of New Jersey. This species is also found in man-disturbed wet areas including abandoned borrow pits, clay pits, ditches, rights-of-way, and unimproved roads. The species is intolerant of shade and competition, and is generally found on relatively bare substrate with sparse vegetation. Threats

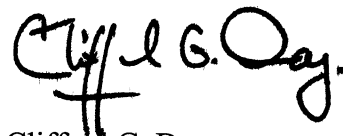
06-15-05P01:06

to Knieskern's beaked-rush include habitat loss from development, agriculture, hydrologic modification, and other wetland alterations; excessive disturbance from vehicle-use, trash dumping, and other activities; and natural vegetative succession of the open, sparsely-vegetated substrate preferred by this species.

The Lakehurst CLTF Draft EA did not indicate whether a survey had been conducted or provide survey results. The Service requests that you conduct a Knieskern's beaked-rush survey and forward the results to the Service's New Jersey Field Office for review. An assessment of potential project impacts may also be required. Project construction or implementation must not commence until the above information has been forwarded to this office to determine if further consultation under Section 7 of the ESA is required. A copy of our previous letter and appropriate survey guidelines are enclosed for your information.

The Service appreciates your efforts to address federally listed species concerns early in the planning process. If you have any questions or require further assistance regarding threatened or endangered species, please contact Lisa Arroyo of my staff at (609) 646-9310, extension 49. Please refer to the above document control number in correspondence.

Sincerely,

A handwritten signature in black ink that reads "Cliff G. Day". The signature is stylized, with the first name "Cliff" written in a cursive-like script and the last name "Day" in a more formal, slightly cursive font.

Clifford G. Day
Supervisor



State of New Jersey

Richard J. Codey
Acting Governor

Department of Environmental Protection
Natural and Historic Resources, Historic Preservation Office
PO Box 404, Trenton, NJ 08625
TEL: (609) 292-2023 FAX: (609) 984-0578
www.state.nj.us/dep/hpo

Bradley M. Campbell
Commissioner

99-1937-2
HPO-G2005-165
July 13, 2005

Dean L. Arrighi, ID-OEC
NJ Department of Military and Veterans Affairs
101 Eggerts Crossing Road
Lawrenceville, New Jersey 08648-2805

Dear Mr. Arrighi:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR 800: Protection of Historic Properties, as published in the Federal Register 18 May 1999 (64 FR 27071-27084) I am providing Consultation Comments for the following project:

Ocean County, Lakehurst Borough
Lakehurst Naval Air Engineering Station
New Jersey Army National Guard (NJARNG)
Consolidated Logistics and Training Facility
U.S. Navy

800.4 Identification of Historic Properties

No resources listed in or eligible for inclusion in the National Register of Historic Places have been identified within the area slated for installation of the Consolidated Logistics and Training Facility. Except for an area in the extreme southeastern corner of the study area (where potential for resources is moderate to high), potential for National Register eligible resources is very low.

800.5 Assessment of Adverse Effects

Installation of the Consolidated Logistics and Training Facility (CLTF) will have no effect on resources on or eligible for inclusion in the National Register of Historic Places. This finding is based on avoidance of construction within the extreme southeastern corner of the study area identified as possessing high to moderate archaeological potential. The Neither the CLTF nor associated improvements such as utility lines and transportation access are slated for installation in or near the southeastern corner of the property.

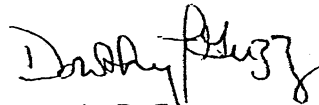
Additional Comments

This finding is based on the Cultural Resource Assessment for the MATES facility prepared by Sandy Steven and Mark Collins and on their recommendation for avoidance of the southeastern corner by the project as well as on the April 2005 *Draft Environmental Assessment for the Construction and Operation of the Proposed Consolidated Logistics and Training Facility at the Lakehurst Naval Air Engineering Station*.

It a point in the future if it appears that avoidance is not possible, in keeping with the recommendations of the cultural resource consultants, Phase 1 archaeological survey of the high and moderated potential area (as identified in the crm report) should be undertaken, and Section 106 consultation with this Office should be re-initiated.

Thank you for providing this opportunity for review and Consultation. If you have any questions, please do not hesitate to contact Deborah Fimbel, staff reviewer for this project, at 609-984-6019.

Sincerely,



Dorothy P. Guzzo
Deputy State Historic
Preservation Officer

DPG:DRF

c. Joe Corleto, Environmental Regulation, NJDEP



State of New Jersey
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
POST OFFICE BOX 340
TRENTON, NEW JERSEY 08625-0340

RICHARD J. CODEY
Acting Governor
Commander-in-Chief

2 August 2005

☆☆
GLENN K. RIETH
Major General
The Adjutant General

Mr. Clifford G. Day, Supervisor
United States Department of the Interior
Fish and Wildlife Service
New Jersey Field Office Ecological Services
927 North Main Street, Building D
Pleasantville, New Jersey 08232

Subject: Draft Environmental Assessment Review, Lakehurst CLTF

Dear Mr. Day:

Thank you for your recent letter providing comments on the *Draft Environmental Assessment for the Proposed Consolidated Logistics Training Facility (CLTF)* at Lakehurst Naval Air Engineering Station.

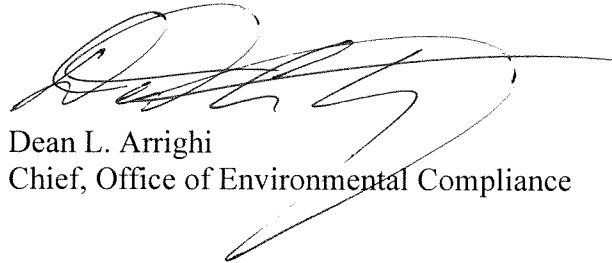
In your letter, you request a survey for the Knieskern's beaked-rush. As stated in your letter, the "Knieskern's beaked-rush...occurs in early successional wetland habitats, often on bog-iron substrate or mud deposits adjacent to slow-moving streams in the Pine Barrens region of New Jersey". This plant is also intolerant to shade. Since no wetlands areas are present within the proposed CLTF, this area would not support this plant or its habitat. Although wetlands are present along the proposed natural gas pipeline route, these wetlands consist of mature vegetation and shaded areas which also would not support the Knieskern's beaked-rush. We are coordinating with the Pinelands Commission so that the natural gas line is installed in a manner that will avoid or mitigate impacts to wetland areas. Furthermore, several reconnaissance surveys have been conducted in the project area and the Knieskern's beaked-rush has not been observed.

Based on the above facts, we believe that a survey for the Knieskern's beaked-rush is not necessary at this time. We will continue to monitor the CLTF project site and the natural gas line route for the presence of the Knieskern's beaked rush. If this species is observed, we will contact your office for consultation in accordance with Section 7 of the ESA.

I would be happy to meet with you and/or your staff at Lakehurst Naval Air Engineering Station to visit the project site and natural gas line route to become familiar with the existing environment there and discuss this issue further if necessary.

If you require further information or wish to discuss this matter further, please contact me at (609) 530-7133, or at dean.arrighi@njdmava.state.nj.us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dean L. Arrighi', with a long horizontal flourish extending to the right.

Dean L. Arrighi
Chief, Office of Environmental Compliance

CF:
COL Barnard, CFMO
LTC Roberta Niedt, PAO
LTC (Ret) Sain, ID
Michael Kon, Lakehurst NAES
Brian Sariano, AMEC



United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Jersey Field Office
Ecological Services
927 North Main Street, Building
Pleasantville, New Jersey 08232

Tel: 609-646-9310

Fax: 609-646-0352

<http://njfieldoffice.fws.gov>



IN REPLY REFER TO:

ES-05/206

OCT 14 2005

New Jersey Department of Military and Veterans Affairs
ATTN: Dean L. Arrighi, ID-OEC
101 Eggerts Crossing Road
Lawrenceville, New Jersey 08648

Reference: Lakehurst Consolidated Logistics and Training Facility Draft Environmental Assessment (Lakehurst CLTF Draft EA) proposed at the Lakehurst Naval Air Engineering Station, Jackson Township, Ocean County, New Jersey

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced proposed project pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of federally listed endangered and threatened species. The following comments do not address all Service concerns for fish and wildlife resources and do not preclude separate review and comment by the Service as afforded by other applicable environmental legislation.

On June 7, 2005 the Service requested a survey to assist in determining the potential impacts of the proposed project on the federally listed Knieskern's beaked-rush (*Rhynchospora knieskernii*). The Service received additional information provided in your letter dated August 2, 2005. Based upon the additional information received, the Service concurs with your determination that wetlands are not present within the proposed CLTF; therefore, Knieskern's beaked-rush will not be adversely affected by the proposed project. A survey for Knieskern's beaked-rush will not be required. Except for an occasional transient bald eagle (*Haliaeetus leucocephalus*), no other federally listed or proposed threatened or endangered flora or fauna under Service jurisdiction are known to occur within the vicinity of the proposed project site. Therefore, no further consultation pursuant to Section 7 of the Endangered Species Act is required by the Service.

If additional information on federally listed species becomes available, or if project plans change, this determination may be reconsidered. No part of this response should be used out of context and if reproduced, should appear in its entirety.

Reviewing Biologist:

Lisa P. Arago

Authorizing Supervisor:

M.C. Stiff

05 OCT 18 AM 9:52

RECEIVED
INSTALLATIONS DIV.

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-----Original Message-----

From: Joyce, John CIV [<mailto:john.joyce@navy.mil>]

Sent: Tuesday, January 03, 2006 2:11 PM

To: Arrighi, Dean

Cc: Blazak, Dennis CIV CNI N8L

Subject: RE: CLTF Project and NAGPRA

Hi Dean,

The CLTF site is classified as "Low" and "Disturbed" on the NAES Archeological Sensitivity Map. The area has been logged over several times since the advent of European settlement and no signs of long-term use or occupation by Native Americans have ever been found in the area. In addition, a surface walkover by archeological contactors several years ago yielded no finds, so it is the opinion of the Environmental Department that no significant historical or cultural resources exist on the project site.

John Joyce
Natural/Cultural Resources Manager
Naval Air Engineering Station Lakehurst
732-323-2911 (DSN 624)
Fax 732-323-5223
John.Joyce@navy.mil

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APPENDIX D

Newspaper Public Notice Affidavits for Public Circulation of the Environmental Assessment



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PUBLIC NOTICES

1.800.822.9770 • X 3960

STATE OF NEW JERSEY

PUBLIC NOTICE NEW JERSEY ARMY NATIONAL GUARD INVITATION TO COMMENT ON THE PROPOSED CONSTRUCTION AND OPERATION OF A CONSOLIDATED LOGISTICS TRAINING FACILITY AT THE LAKEHURST NAVAL AIR ENGINEERING STATION JACKSON TOWNSHIP, NEW JERSEY

The New Jersey Army National Guard (NJARNG) proposes to construct a Consolidated Logistics Training Facility (CLTF) at the Lakehurst Naval Air Engineering Station (NAES) in Jackson Township, New Jersey. The purpose of the proposed action is to consolidate NJARNG logistical support into an efficient, modern facility that is within reasonable driving distance to the Fort Dix United States Army Reserve (USAR) training ranges and facilities, and to provide a state-of-the-art training and logistics facility for NJARNG units and other regional Army National Guard (ARNG) units.

The proposed action would include phased construction over a 5-7 year period of a Combined Support Maintenance Shop, Unit Training Equipment Site, Regional Training Facility, and Controlled Humidity Vehicle Storage Facility. The proposed action would also include upgrading existing roadways in the area and extending a NAES natural gas pipeline to the project site.

An analysis of the potential environmental impacts of the proposed action are presented in a Draft Environmental Assessment, which is available for public review and comment. The document will be available for review from April 27 to May 27, 2005 at the following locations:

- Manchester Branch of Ocean County Library, 21 Colonial Drive, Lakehurst, NJ 08733 (Monday-Thursday 9 a.m.-9 p.m.; Friday-Saturday 9 a.m.-5 p.m.)
- New Jersey Dept. of Military & Veterans Affairs, Installations Division, 101 Eggert Crossing Road, Lawrenceville, NJ 08648 (Monday-Friday 8 a.m.-4 p.m.)

Written public comments concerning this proposed action is invited, and will be received no later than May 30, 2005. Comments should be addressed to: Mr. Dean L. Arrighi, Chief, Office of Environmental Compliance, New Jersey Department of Military and Veterans Affairs, 101 Eggert Crossing Road, Lawrenceville, NJ 08648-2805.

Questions may be directed to LTC Roberta Niedt, Public Affairs Officer, New Jersey Army National Guard, (609) 530-6939.

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**PUBLIC NOTICE
NEW JERSEY ARMY NATIONAL GUARD
INVITATION TO COMMENT
ON THE PROPOSED CONSTRUCTION AND
OPERATION OF A CONSOLIDATED LOGISTICS
TRAINING FACILITY AT THE
LAKEHURST NAVAL AIR ENGINEERING
STATION, JACKSON TOWNSHIP, NEW JERSEY**

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Questions may be directed to LTC Roberta Niedt, Public Affairs Officer, New Jersey Army National Guard, (609) 530-6939.

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4/26/05 Times



APPENDIX E

Comments and Responses on the Draft Environmental Assessments



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APPENDIX E
Final Environmental Assessment for the Construction and Operation of the
Consolidated Logistics and Training Facility at Lakehurst Naval Air Engineer Station

Comment No.	The comment refers to the following location in the document:						Comment	Name of Reviewer	Office of Reviewer	Action Taken by State to Address Comment
	Chapter	Section	Page	Paragraph	Line No.	Sentence				
1	N/A	N/A	iii	N/A	N/A	N/A	...states that these documents determine that an Environmental Impact Statement (EIS) is not necessary for the implementation of Alternative 3. Pinelands Preservation Alliance (PPA) disagrees because the Cumulative Impacts associated with the proposed Combined Logistics and Training Facility (CLTF) at Lakehurst Naval Air Station are not fully addressed in the Draft Assessment Review.	Theresa Lettman	Pinelands Preservation Alliance	"The New Jersey Army National Guard (NJARNG) disagrees with this statement based on the fact that cumulative impacts are fully assessed in the draft Environmental Assessment (EA), except for the shopping center to which you referred to in your letter that the Manchester Township Planning Board has approved. Therefore, this shopping center project will be addressed in the Cumulative Impacts section of the final EA."
2	General						"To date there has been no development on the western two-thirds of Lakehurst NAES and with this proposal the government is going to disturb some 110 acres for the fenced in portion of the proposal which is northern pine snake habitat, signalized Route 539, install a natural gas line that will impact wetlands in the North Ruckles Branch, install a water well in close vicinity of the Boeing Michigan Aeronautical Research Center (BOMARC) Missile site for water, pave of existing gravel roads and increase on-site hazardous and toxic materials. All this activity and development has impacts that are not addressed in the Environmental Assessment Review."	Theresa Lettman	Pinelands Preservation Alliance	"This statement is inaccurate, since portions of the CLTF site were previously disturbed as a Satellite Communications (SATCOM) site and two Borrow Pits. Of the 140-acre Proposed Action site, approximately 20-25 acres are previously disturbed (SATCOM, borrow pits, roads); and another 10-20 acres will remain undeveloped to protect northern pine snake habitat. Furthermore, the proposed parcel has been identified in the Lakehurst Master Plan as the only area in the western portion of the installation that can be developed. Therefore, the Proposed Action is in conformance with the Lakehurst NAES Master Plan. No change made to document."
3	General						"There will be a loss of northern pine snake habitat in the Pinelands Preservation Area of Lakehurst Naval Air Engineering Station (NAES). The continued ""little bits"" of lost habitat may have big impacts on this state threatened species. What will be the ongoing impacts with this additional activity in this portion of Lakehurst NAES?"	Theresa Lettman	Pinelands Preservation Alliance	"According to the 4 March 2004 letter from the Pinelands Commission, "proposed development will not have an irreversible adverse impact on habitats that are critical to the survival of any local population of northern pine snakes." Preservation of northern pine snake habitat in the vicinity of the CLTF is being closely coordinated with the Pinelands Commission. No change made to document."



Comment No.	The comment refers to the following location in the document:						Comment	Name of Reviewer	Office of Reviewer	Action Taken by State to Address Comment
	Chapter	Section	Page	Paragraph	Line No.	Sentence				
4	General						It was documented in the BOMARC cleanup activities that the northern pine snake utilizes the boundary roadway of Lakehurst NAES. What will be the impacts to the habitat due to the increase of traffic along this roadway?	Theresa Lettman	Pinelands Preservation Alliance	Significant increases in traffic along South Boundary road due to CLTF operations are not expected. The main access to the CLTF site will come from Route 539.
5	General						"The June 8, 2001 letter from the United States Fish and Wildlife Service (USFWS) talks about the potentially suitable habitat for the federally listed plant, Knieskern's beaked-rush, but your report does not indicate if a survey was completed for this plant."	Theresa Lettman	Pinelands Preservation Alliance	"According to the USFWS, this plant is a wetland plant that is only supported in early successional wetlands and is intolerant to shade. No wetland areas are present within the proposed CLTF site. Wetlands are present along the proposed natural gas pipeline route; however, these wetlands areas consist of mature vegetation and shaded areas. Therefore, it is unlikely that this plant would be found in the vicinity of the proposed natural gas pipeline route. A statement has been added to the EA to indicate this. In addition, a survey for the Knieskern's beaked-rush will be conducted along with the wetland delineation for the natural gas line. If the Knieskern's beaked-rush should be observed, appropriate Section 7 consultation with the USFWS would occur. Section 4.8.4 revised for clarity."
6	General						What if any threatened and endangered plants exists downstream from the water well or installation of the natural gas pipeline? If so have you considered the impacts?	Theresa Lettman	Pinelands Preservation Alliance	"Installation of the well will have no impact on surficial vegetation and water levels because the well will be approximately 150 feet deep and will have a low pumping rate of approximately 50 Gallons Per Minute (GPM). Furthermore, the Lakehurst water allocation permit allows use of 21 million gallons per month of water usage. Currently, Lakehurst uses only 16 million gallons per month. Water usage for the proposed CLTF is estimated at 540,000 gallons per month. Therefore, the current NAES usage combined with the estimated CLTF consumption is still below the 21 million gallons per month allowance in the Lakehurst water allocation permit."



Comment No.	The comment refers to the following location in the document:						Comment	Name of Reviewer	Office of Reviewer	Action Taken by State to Address Comment
	Chapter	Section	Page	Paragraph	Line No.	Sentence				
7	4	4.13.7.2	4.34	N/A	N/A	N/A	The BOMARC missile site was identified as an area of environmental concern in 2003 to the CLTF site. Has the concern increased since it has been determined that the plume has been getting larger over the past several years? Has the concern increased since it has been determined by the two additional surveys that plutonium contaminated soil exists outside the fenced-in area? What impacts to these new findings has on the CLTF site?	Theresa Lettman	Pinelands Preservation Alliance	"The Volatile Organic Compound (VOC) plume from BOMARC is moving away from the proposed CLTF site. It is moving northeast into the Colliers Mills Wildlife Management Area. Therefore, the CLTF water quality should not be affected by BOMARC contamination. Section 4.13.8 updated for clarity."
8	General						What will be the environmental impacts associated with all the additional vehicle traffic on Route 539?	Theresa Lettman	Pinelands Preservation Alliance	"As per the traffic study conducted by Orth-Rodgers & Associates (ORA), the only impacts pertaining to traffic associated with the proposed CLTF site would be realized in increased signal delays resulting from proposed tank crossing of Route 539 (see Section 4.11.6.1). Furthermore, potential environmental air quality impacts associated with increased vehicular traffic was analyzed in the Record of Non-Applicability (RONA) (See Final EA, Appendix F). The RONA indicates no significant impacts to air quality is anticipated as a result of traffic associated with the proposed project. "
9	General						This portion of Route 539 abuts the Manchester Wildlife Management Area. Manchester Township Planning Board has also approved a very large Shopping center to the south of the CLTF site in the Town of Whiting. Can this vehicle traffic mix well with the additional military traffic?	Theresa Lettman	Pinelands Preservation Alliance	"The traffic associated with the proposed CLTF site will primarily consist of Privately Operated Vehicles (POVs) or street-legal military vehicles, which will mix well with existing traffic. The Proposed Action includes widening the northbound side of Route 539 at the CLTF entrance to accommodate safety acceleration/deceleration lanes."



Comment No.	The comment refers to the following location in the document:						Comment	Name of Reviewer	Office of Reviewer	Action Taken by State to Address Comment
	Chapter	Section	Page	Paragraph	Line No.	Sentence				
10	General						"Our [NJDEP] review concurs with the finding of the Draft EA that the proposed actions would have no significant adverse impacts on the environment provided noted permits/approvals from the New Jersey Department of Environmental Protection (NJDEP) and the New Jersey Pinelands Commission are obtained, and proposed mitigated measures are implemented. "	Kenneth Koschek	NJDEP	"Joe Corleto spoke with Ken Koschek on 13 July 2005 regarding the review of the CLTF. Ken indicated the EA was not circulated within in the DEP as is the case with some other projects. He explained that upon completion of his review all the environmental concerns he identified were clearly addressed in the EA. More specifically he indicated any concerns related to historic preservation or northern pine snake issues were clearly addressed by the documentation included in the EA.
11	General						"The Draft EA notes that in regard to the State-listed endangered northern pine snake, impacts will be managed to less-than-significant levels through consultation with the New Jersey Pinelands Commission, the USFWS and the NJDEP's Division of Fish, Game and Wildlife, to develop a mutually acceptable plan to minimize impacts. We support this consultation process."	Kenneth Koschek	NJDEP	Comment noted.
12	General						The NJDEP also concurs that the Draft EA supports a Finding of No Significant Impact (FONSI).	Kenneth Koschek	NJDEP	Comment noted.
13	General						"The Service previously review the proposed project in a letter dated June 8, 2001 and recommended a survey to determine the presence or absence of Knieskern's beaked-rush. The Lakehurst CLTF Draft EA did not indicate whether a survey had been conducted or provide survey results. The Service requests that you conduct a Knieskern's beaked-rush survey and forward the results to the Service's New Jersey Field Office for review. An assessment of potential project impacts may also be required."	Clifford Day	USFWS	"According to the USFWS, this plant is a wetland plant that is only supported in early successional wetlands and is intolerant to shade. No wetland areas are present within the proposed CLTF site. Wetlands are present along the proposed natural gas pipeline route; however, these wetlands areas consist of mature vegetation and shaded areas. Therefore, it is unlikely that this plant would be found in the vicinity of the proposed natural gas pipeline route. A statement has been added to Section 4.8.4 to indicate this. If the Knieskern's beaked-rush should be observed, appropriate Section 7 consultation with the USFWS would occur. Further, Dean Arrighi initiated coordination with the USFWS regarding the presence/absence of Knieskerns beaked-rush; a copy of the letter is provided in Appendix C."



Comment No.	The comment refers to the following location in the document:						Comment	Name of Reviewer	Office of Reviewer	Action Taken by State to Address Comment
	Chapter	Section	Page	Paragraph	Line No.	Sentence				
14	General						"The Pinelands Commission previously issued a letter on March 4, 2004 indicating that the development of the Training Facility site would not have an irreversible adverse impact on habitats that are critical to the survival of any local population of Northern pine snakes. The April 2005 Draft EA indicates that, in addition to the Training Facility site, improvements to approximately three miles of South Boundary Road and the installation of approximately 3.5 miles of a natural gas main are now proposed as part of the project. These improvements were not included in previous documents and have not been previously reviewed by our staff. It appears that the road improvements and gas main may be located within wetlands and/or wetland buffers. Depending on the extent of the proposed improvements to the South Boundary Road and the location of the proposed natural gas line, it may be necessary to address alternative routes for the road and gas main."	Ernest Deman	The Pinelands Commission	"The Pinelands Commission and Lakehurst NAES personnel performed a site walk of the proposed natural gas line. Additionally, the NJARNG submitted a Pinelands Compliance Report to the Pinelands Commission in May 2005. Furthermore, the NJARNG will submit a revised Pinelands Compliance Report to the Pinelands Commission, which will outline all proposed activities."
15	General						"All proposed development must meet the threatened and endangered species standards of the Pinelands Comprehensive Management Plan (CMP). Although it was previously determined that the development of the Training Facility site would not have an irreversible adverse impact on habitats that are critical to the survival of any local populations of North pine snakes, it is unclear if the proposed improvements to the South Boundary Road and the installation of approximately 3.5 miles of a natural gas main are consistent with the threatened and endangered species standards of the CMP. The proposed road improvements and gas main appear to be routed through several areas of the Lakehurst NAES with northern pine snake sightings reported by base personnel. If you wish to pursue the proposed road improvements and gas main installation, as currently proposed, please contact our office to schedule a meeting."	Ernest Deman	The Pinelands Commission	See response to comment #24.



Comment No.	The comment refers to the following location in the document:						Comment	Name of Reviewer	Office of Reviewer	Action Taken by State to Address Comment
	Chapter	Section	Page	Paragraph	Line No.	Sentence				
16	General						"Please refer to our January 14, 2000 letter for the items necessary to complete the Training Facility site application. Please note that a cultural resource survey in accordance with the Pinelands CMP (N.J.A.C. 7:50-6.155) and the Pinelands Cultural Resource Management Plan will be required. For further information regarding the survey requirements, please contact Dr. Barry Brady of our staff."	Ernest Deman	The Pinelands Commission	"A copy of the updated consultation review letter from the Deputy State Historic Preservation Officer (SHPO) for New Jersey will be provided in Appendix C of the Final EA; a copy of the Final EA will be provided to the Pineland Commission. Furthermore, a copy of the updated consultation review letter from the SHPO was provided in the Pinelands Compliance Report, which was submitted in May 2005."
17	General						"In addition to Jan 14, 2000 letter (for proposed road improvements and gas main): Please flag or otherwise clearly mark in the field in the boundaries of the wetlands that are located on or within 300 feet of the proposed road improvements and gas main. Once the wetlands boundaries have been delineated....an on-site inspection of the wetlands line(s) can be completed by the Commission staff."	Ernest Deman	The Pinelands Commission	On 24 May 2005, the Pinelands Commission project manager and Lakehurst NAES personnel performed a site walk along the proposed natural gas line route to discuss potential wetland impact issues. Based on a review of the site conditions, it has been determined that the natural gas line will be installed in the existing roadways in a manner that will avoid impacts to wetlands and surface waters. Therefore, wetland and/or stream encroachment permitting will not be required. To ensure the gas line installation is in full compliance with applicable laws and regulations, a separate Pinelands Development Application will be submitted to the Pinelands Commission, and project approval will be obtained, prior to construction.
18	General						"In addition to Jan 14, 2000 letter (for proposed road improvements and gas main): Since it appears that linear development will be located in wetlands and/or wetland buffers, N.J.A.C. 7:50-6.13 must be addressed.it must be demonstrated that there are no feasible alternatives for the proposed development that will result in less wetland impacts. "	Ernest Deman	The Pinelands Commission	See response to comment #17.



Comment No.	The comment refers to the following location in the document:						Comment	Name of Reviewer	Office of Reviewer	Action Taken by State to Address Comment
	Chapter	Section	Page	Paragraph	Line No.	Sentence				
19				General			"In addition to Jan 14, 2000 letter (for proposed road improvements and gas main): A storm water management plan prepared by an appropriately licensed professional along with stormwater drainage calculations. The calculations must be provided utilizing the Soil Conservation Service Technical Release No. 55, ""Urban Hydrology for Small Watersheds."" The calculations should demonstrate compliance with the following standards: a. The total volume of runoff generated from any net increase in impervious surfaces by a 10 year storm of a 24 hour duration shall be retained and infiltrated on-site. b. The peak rates of runoff generated by the parcel for a 2 year, 10 year and 100 year storm of a 24 hour duration shall not increase as a result of development of the site."	Ernest Deman	The Pinelands Commission	Statement added to document that a stormwater management plan will be developed.
20				General			"In addition to Jan 14, 2000 letter (for proposed road improvements and gas main): The results of a soil boring taken within each stormwater recharge area must be submitted. The bottom of all recharge facilities must be located an adequate distance (2 feet minimum) above the seasonal high water table. Provide a numerical estimation of the seasonal high water table. "	Ernest Deman	The Pinelands Commission	Statement added to document that stormwater management plan will be developed.
21				General			"In addition to Jan 14, 2000 letter (for proposed road improvements and gas main): Provide a description of a proposed maintenance and inspection program for the stormwater management system. Identify the party that will be responsible for the maintenance and inspections and include a schedule for these activities. "	Ernest Deman	The Pinelands Commission	"The NJARNG submitted a Pinelands Compliance Report to the Pinelands Commission in May 2005. The NJARNG will submit a revised Pinelands Compliance Report to the Pinelands Commission, which will include a description of a proposed maintenance and inspection program for the stormwater management system."
22				General			"No resources listed in or eligible for inclusion in the National Register of Historic Places have been identified within the area slated for installation of the Consolidated Logistics and Training Facility. Except for an area in the extreme southeastern corner of the study area (where potential for resources is moderate to high), potential for National Register eligible resources is very low."	Dorothy P. Guzzo	"New Jersey Department of Environmental Protection, Historic Preservation Office"	Comment noted.



Comment No.	The comment refers to the following location in the document:						Comment	Name of Reviewer	Office of Reviewer	Action Taken by State to Address Comment
	Chapter	Section	Page	Paragraph	Line No.	Sentence				
23	General						Installation of the Consolidated Logistics and Training Facility will have no effect on resources on or eligible for inclusion in the National Register of Historic Places. This finding is based on avoidance of construction within the extreme southeastern corner of the study area identified as possessing high to moderate archaeological potential. Neither the CLTF nor associated improvements such as utility lines and transportation access are slated for installation in or near the southeastern corner of the property.	Dorothy P. Guzzo	"New Jersey Department of Environmental Protection, Historic Preservation Office"	Comment noted.



APPENDIX F

Conformity Rule Compliance Record of Non-Applicability



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Conformity Rule Compliance Record of Non-Applicability

Project/Action Name: Construction and Operation of a Consolidated Logistics Training Facility (CLTF) for the New Jersey Army National Guard (NJARNG) at the Lakehurst Naval Air Engineering Station (NAES)

Contractor Contract #: DAHA92-01-D-0006; Delivery Order ZK01

Project/Action POC: Mr. Dean L. Arrighi, Chief, Office of Environmental Compliance, New Jersey Department of Military and Veterans Affairs (NJDMVA), 101 Eggert Crossing Road, Trenton, NJ 08625-0340, Tel (609) 530-7133

Action Duration: Permanent

Conformity under Clean Air Act, Section 176, has been evaluated for the above-described project per 40 CFR Part 51. The requirements of this rule are not applicable to this action because:

Total direct and indirect emissions increases from the proposed action have been estimated at:

Alternative 3 (Preferred Alternative)

Annual Recurring Emissions

- 4.48 tons per year (tpy) of Volatile Organic Chemicals (VOCs); and
- 4.78 tpy of Oxides of Nitrogen (NOx).

One time Construction Emissions

- 2.54 tons VOCs; and
- 24.93 tons of NOx.

Alternative 5 (No Action Alternative)

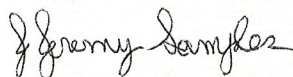
- This alternative was not evaluated because there would be no change in air emissions.

The emission increases from the proposed action are below the *de minimus* threshold established at 40 CFR 51.853(b) of 50 tpy VOCs and 100 tpy NOx, and the proposed action is not considered "regionally significant" under 40 CFR 51.853(i).

The supporting documentation and emissions estimates are:

X ATTACHED
ATTACHED TO NEPA DOCUMENT
OTHER

Prepared by:



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Concurred by:



Dean L. Arrighi
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Record of Non-Applicability Supporting Documentation

Proposed Construction and Operation of a Consolidated Logistics Training Facility
for the New Jersey Army National Guard at the Lakehurst Naval Air Engineering Station

1.0 Summary Description of the Proposed Action (Alternative 3)

The following provides a summary of the more detailed information presented in the Environmental Assessment (EA) prepared for the proposed action. Under the Preferred Alternative (Alternative 3), the New Jersey Army National Guard (NJARNG) proposes to construct a Consolidated Logistics Training Facility (CLTF) at the Lakehurst Naval Air Engineering Station (NAES) in Jackson Township, New Jersey. The proposal includes:

- Acquire, via lease agreement, 140 acres from the Lakehurst NAES;
- Construct the CLTF using a phased approach;
 - Phase 1 - Combined Support Maintenance Shop (CSMS) – 109,000 square feet
 - Phase 2 - Unit Training Equipment Site (UTES) – 84,000 square feet
 - Phase 3 - Regional Training Facility – 90,000 square feet
 - Phase 4 - Controlled Humidity Vehicle Storage Facility – 325,000 square feet; and an Advanced Tank Bath Facility – 1,350 square feet
- An upgrade to approximately 4,000 feet of an existing unpaved road (i.e. widening), as well as the construction of approximately 1,900 feet of roadway between the proposed CLTF and the military training ranges at Fort Dix for travel by various military tactical and non-tactical vehicles;
- Upgrade the existing Lakehurst NAES South Boundary Road for access/egress to the developed eastern portion of the NAES;
- Construct a paved road for access/egress between Ocean County Route 539 and the proposed CLTF; and,
- Extend the natural gas line approximately three (3) miles southwest along South Boundary Road and approximately 0.5 miles northwest towards the proposed CLTF site. The proposed natural gas line is a six (6)-inch pipe placed approximately 42 inches underground, traveling both on and off the roadway.

Construction of the new CLTF will result in a centralized facility that will prevent deterioration of logistical and/or training readiness. The proposed new facility location will also consolidate the NJARNG's logistical support functions, allowing for closure of the following obsolete facilities: Bordentown CSMS, Fort Dix UTES, and two (2) Organizational Maintenance Shops (OMSs) located in Sea Girt and Toms River. The CLTF will be developed in a series of four (4) distinct phases to meet the NJARNG's mission priorities and as capital funding becomes available. Each phase will complement the preceding development in order to provide a safe and efficient support and training facility. This approach will enable the NJARNG to fulfill its mission into the future in a cost effective manner through the provision of a technologically advanced, integrated facility.

2.0 Overview of Considered Project Alternatives

The referenced EA considered five (5) possible alternatives, summarized as follows:

Alternative 3: Preferred Project Alternative - Construct the CLTF in a 140-acre site on the western portion of the Lakehurst NAES at the former Lakehurst satellite communications (SATCOM) site.

Alternative 5: No Action Alternative - Do not construct the CLTF and continue to utilize the substandard logistical support and training facilities currently operated by the NJARNG.

Three (3) additional alternatives were considered, but eliminated from further evaluation because they did not adequately meet the purpose and need for the proposed action, or were determined to be logistically infeasible. Air emission increases due to these additional alternatives were not evaluated and are not presented in this document.

3.0 Purpose of the Record of Non-Applicability (RONA)

The proposed CLTF will be located in Ocean County, New Jersey, which is a designated moderate National Ambient Air Quality Standards (NAAQS) non-attainment area for ozone. Tropospheric ozone is created by volatile organic compounds (VOCs) and nitrogen oxides (NOx) emissions via a process known as photochemical air pollution. Therefore, VOCs and NOx emissions are regulated as a means of controlling ozone production. Alternative 3 would alter VOCs and NOx emissions within the local air shed through commuting to and from the CLTF by troops, storage tanks, building heaters, and construction activities. In compliance with the General Conformity Rule (40 CFR Part 51, Subpart W) and the National Environmental Policy Act (NEPA; 42 USC 4321 *et seq.*), current Army and ARNG guidance dictates that a Record of Non-Applicability (RONA) be prepared in cases where the proposed increase in emissions is clearly *de minimus*. The State of New Jersey has not promulgated a General Conformity Rule, but has adopted the federal guidelines for *de minimus* threshold levels; therefore, the regulatory pollutants for this proposed action are 50 tons per year of VOCs and 100 tons per year of NOx.

4.0 Methodology

Specific guidance detailing conformity requirements and policies that were followed to prepare the RONA are found in the *Department of the Army Guide for Compliance with the General Conformity Rule Under the Clean Air Act* (USACE, 15 June 1995).

4.1 Vehicles

The EPA model *Mobile 6.2* was used to calculate both direct and indirect mobile source (vehicular) emission factors. This emissions model was approved by the United States Environmental Protection Agency and became available to the public on 29 January 2002. *Mobile6.2* allows users to quantify vehicular emissions based on the vehicle type. The model utilizes data of average speeds driven by the average driver, including highway and local travel.

Construction of the new CLTF and the subsequent consolidation of the four (4) obsolete facilities will result in no additional use or maintenance of the tracked and wheeled vehicles that are currently located at the Fort Dix UTES. However, vehicle storage and maintenance that currently occur at the Bordentown CSMS, Sea Girt OMS, and Toms River OMS will be conducted at the CLTF; therefore, eliminating the weekend air emissions resulting from travel between these facilities and weekend

training activities conducted at Fort Dix. The referenced EA indicates that 223 wheeled vehicles and 120 various trucks will be stored at the proposed CLTF. For calculations, it was estimated that half of these vehicles traveled to Fort Dix UTES during each training session. It was further estimated that the average distance traveled by these vehicles is 40 miles. Because these emissions will no longer be generated, the emissions from weekend travel by military vehicles were then subtracted from the total emissions. It is anticipated that the number and usage of tracked military vehicles will not change, only their respective location of use would change. Therefore, military tracked vehicles were not included in the emission estimates.

Indirect air emissions associated with the use of the CLTF were also evaluated. Use of privately owned vehicles (POVs) for full-time personnel currently stationed at the Fort Dix UTES will not increase; however, it may increase for the full-time personnel currently stationed at the Bordentown CSMS, Sea Girt OMS, and Toms River OMS. Conservative estimates of the maximum additional POV travel for these full-time personnel would result in a maximum total commute of 2,925,000 miles/year (i.e., 65 miles/vehicle x 250 round trips/year x 180 vehicles/round trip). 65 miles is the roundtrip distance between Lakehurst and Bordentown (the furthest of the obsolete facilities). There are 250 working days a year, accounting for two (2) weeks of vacation. 180 full-time personnel represents full-force at the CLTF.

Weekend troops that are currently stationed at the Bordentown CSMS, Sea Girt OMS, and Toms River OMS travel to their home station by POV and then to Fort Dix via military vehicles. These weekend troops come from various portions of New Jersey, New York, Pennsylvania, and Delaware. Due to the location of the CLTF in the middle of New Jersey and the various distances and directions of the weekend troops' residences from both the CLTF and their current home stations, air emissions from weekend troops traveling from their residences to the CLTF in their POVs is assumed to be approximately the same as those produced from weekend troops traveling from their residences to their home stations by POV. However because of the highly variable nature of weekend POV use, a conservative estimate of an additional 40 miles per trip was used for modeling purposes. This would result in an increase of 13,760 miles per year (i.e. 40 miles/vehicle * 24 round trips/year * 172 vehicles/round trip).

See **Addendum 1** for the model input, output, and annual military vehicle and POV emission calculations. There are two (2) files associated with the *Mobile 6.2* model. An example calculation is as follows: (180 vehicles/ training day * 65 miles/vehicle * 250 training days year * 1.2285 grams VOCs/mile * 0.002203 grams/lb * 0.0005 tons/lb = 3.958 tpy VOCs).

4.2 Generators

According to Mr. Dean Arrighi, the proposed buildings will not use permanent emergency generators as a substitute for the local power company in times of power outages. The buildings will be designed with exterior outlets for hook-up of portable military generators in the event of a power outage. These generators would not be located at the CLTF, and would be transported from other NJARNG facilities if they are needed. However, since the primary residence of these generators is not at the CLTF and no onsite testing program is planned, no calculations are included.

4.3 Storage Tanks

One 10,000-gallon diesel AST will be utilized at the site. According CW5 Menschner, approximately 7,500 gallons of fuel will be consumed per year from this AST. Calculations indicated that minimal amounts of VOCs would be emitted from this diesel AST.

Two 500-gallon used oil ASTs will be located at the proposed CTLF in conjunction with the current recycling program. According to CW5 Menschner, the throughput will be approximately 600 gallons per year per tank.

In addition, there will be a UST installed for wastewater storage from the closed loop wastewater recycling system. This wastewater will be a combination of water, dirt, and oils and will be generated when the recycling system temp holding tank is flushed out periodically, according to Dean Arrighi. However, since the primary contents of this UST are non-petroleum products, the emissions from this AST are considered to be insignificant. Therefore, no calculations for this AST are included.

Fuel storage emissions were calculated by using USEPA's TANKS (version 4.0) program. This program was developed by USEPA to estimate emissions of organic chemicals from storage tanks. The calculations within the program are based on AP-42, Section 7. The TANKS printouts are included in **Addendum 2**. Emissions from the storage tanks are based on tank dimensions, product throughput, local climate, and the characteristics of the stored products.

See **Addendum 2** for the annual tank emission calculations, and the TANKS program printouts.

4.4 Natural Gas Boilers and Water Heaters

According to Mr. David Pease (A/E for the NJARNG), the CSMS (Phase 1), UTES (Phase 2), and Regional Training Facility buildings (Phase 3) will utilize one (1) 150-gallon commercial water heater and three (3) 50-gallon water heaters. Also, according to Mr. Pease, it is estimated that the CSMS, UTES, and Regional Training Center will utilize two (2) large boilers each. The Controlled Humidity Vehicle Storage Facility (Phase 4) is anticipated to utilize eight (8) small boilers due to the reduced size of each section of building. It is anticipated that no hot water heaters will be used at the Controlled Humidity Vehicle Storage Facility. The natural gas fuel consumption will be based on the size of building.

Natural gas consumption factors for heating commercial buildings were obtained from the United States Department of Energy *Commercial Buildings Energy Consumption and Expenditures 1992* (USDOE, 1992). The annual natural gas consumption factors, arranged by building size and listed in units of standard cubic feet (scf) of natural gas per square foot per year (sqft-year) are as follows:

- 25,001-50,000 sqft: 48.2 scf/sqft-year
- 50,001-100,000 sqft: 43.2 scf/sqft-year
- 100,001-200,000 sqft: 28.1 scf/sqft-year
- 200,001-500,000 sqft: 37.3 scf/sqft-year

Emission factors for natural gas were obtained from *AP-42, Section 1.4, Natural Gas Combustion*. Natural gas emissions from a low NO_x, small boiler with a heat input less than 100 million Btu/hr are: 5.5 lbs of VOCs/1,000,000 scf of natural gas and 50 lbs of NO_x/1,000,000 scf of natural gas.

Assuming a required heating input of 2,000 Btu/hr-gallon, a commercial 150-gallon water heater will produce approximately 300,000 Btu/hour, and a 50-gallon hot water heater will require 100,000 Btu/hr. The average heating value of natural gas is approximately 1,020 Btu/scf of natural gas (USEPA, 2003).

Emission factors for natural gas were obtained from *AP-42, Section 1.4, Natural Gas Combustion*. Natural gas emissions from an uncontrolled residential boiler with a heat input of less than 0.3 million Btu/hr are: 5.5 lbs of VOCs/1,000,000 scf of natural gas and 94 lbs of NO_x/1,000,000 scf of natural gas.

See **Addendum 3** for the annual natural gas emission calculations. An example calculation for the VOCs emitted from the CSMS boiler is $(109,000 \text{ sqft}) * (28.1 \text{ scf/sqft-year}) * (5.5 \text{ lbs of VOCs/1,000,000 scf}) * (1 \text{ ton/2,000 lbs}) = 0.0084 \text{ tons of VOCs/year}$. An example calculation for the VOCs emitted from the CSMS domestic hot water heater is $(500,000 \text{ Btu/hr}) * (8760 \text{ hours/year}) * (1 \text{ scf of natural gas/1,020 Btu}) * (5.5 \text{ lbs of VOCs/1,000,000 scf}) * (1 \text{ ton/2,000 lbs}) = 0.0118 \text{ tons of VOCs/year}$.

4.5 Construction

There would be a one-time direct emission increase for Alternative 3 due to the construction of the proposed CLTF. An AMEC engineer familiar with the project estimated the construction equipment usage for the construction of the CLTF. The emission factors for the construction equipment were taken from Table A9-8 of the *CEQA Air Quality Handbook* developed by the South Coast Air Quality Management District.

See **Addendum 4** for the one-time construction emission calculations. An example calculation for the VOCs emitted from a 356 horsepower bulldozer is: $(2 \text{ Bulldozers}) * (356 \text{ hp}) * (40 \text{ hr/wk}) * (8 \text{ weeks}) * (0.0210 \text{ lbs of VOCs/hp-hr}) * (0.620 \text{ 'load factor'}) * (1 \text{ ton/2,000 lbs}) = 1.483 \text{ tons of VOCs/year}$.

5.0 Results and Conclusions

Since the General Conformity Rule requires only analysis of emissions of criteria pollutants and their precursors for which an area is designated a non-attainment or maintenance area, emissions were calculated only for the precursors of ozone, VOCs and NOx, as part of this RONA documentation. Calculations regarding fugitive dust were not prepared, as these are not required under the General Conformity Rule.

By applying the above methodology, the analysis revealed that the proposed action would result in annual emission increases of 4.48 tons of VOCs per year and 4.78 tons of NOx per year. The proposed action would also result in a one-time increase of 2.54 tons of VOCs and 24.93 tons of NOx during construction activities. The increases in emissions are below the *de minimus* thresholds of 50 tons per year of VOCs and 100 tons per year of NOx. The calculations made in reaching this determination are presented on the attached pages.

Based on the above, the proposed action at the CLTF, under either Alternative 3 or 5, is expected to have total emissions well below the *de minimus* threshold levels; therefore, this RONA satisfies the General Conformity Rule. This analysis has been performed in full compliance with the *Department of the Army Guide for Compliance with the General Conformity Rule Under the Clean Air Act* (USACE, 15 June 1995). As such, this RONA documents the ARNG's decision not to prepare a written conformity determination for the proposed action. This RONA will remain on file at the PAARNG Environmental Section office.

6.0 References

Arrighi, Dean; NJARNG, Personal Communication, 01 February 2005.

CW 5 Mensschner, Frederick; NJARNG, Personal Communication, 27 January 2005.

Loman, Dave; NJARNG, Personal Communication, 12 January 2005.

Pease, David; A/E NJARNG, Personal Communication, 11 January 2005.

Sergeant Chiarvallo; NJARNG, Personal Communication, 11 January 2005.

South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook*.

CW 2 Tolosi, Michael; NJARNG, Personal Communication, 27 January 2005.

United States Department of Energy (USDOE). 1992. *Commercial Buildings Energy Consumption and Expenditures*. <http://tonto.eia.doe.gov/ftproot/consumption/031892.pdf>

United States Environmental Protection Agency (USEPA). 2003. *AP-42, Section 1.4, Natural Gas Combustion*.

ADDENDUM 1

Annual Military Vehicle and POV Emissions

Average Military Vehicle Emission Factors

Pollutant	LDGT12 Emission Factor (g/mile)	LDGT12 Vehicle Percentage	LDDT Emission Factor	LDDT Vehicle Percentage	HDDV Emission Factor	HDDV Vehicle Percentage	Average (g/mile)
VOC	1.3290	0.34	3.7120	0.0002	0.3480	0.56	0.6485
NOx	0.9800	0.34	3.6490	0.0002	6.4780	0.56	3.9860

Average POV Emission Factors

Pollutant	LDGV Emission Factor (g/mile)	LDGV Vehicle Percentage	LDGT12 Emission Factor	LDGT12 Vehicle Percentage	Average (g/mile)
VOC	1.1970	0.75	1.3290	0.250	1.2285
NOx	0.9910	0.75	0.9800	0.250	0.9871

Annual Military Vehicle and POV Emissions

Pollutant	Emission Source	Vehicles/ Training Day	Miles/vehicle	Training Days/ Year	g pollutant/ mile	Conversion (lb/g)	Conversion (ton/lb)	Emissions (tons/year)	Total Emissions (tons/year)
VOC	Military vehicles	172	-40	24	0.6485	0.002203	0.0005	-0.118	4.373
	FT POV vehicles	180	65	250	1.2285	0.002203	0.0005	3.958	
	WE POV vehicles	410	40	24	1.2285	0.002203	0.0005	0.533	
NOx	Military vehicles	172	-40	24	0.6485	0.002203	0.0005	-0.118	3.490
	FT POV vehicles	180	65	250	0.9871	0.002203	0.0005	3.180	
	WE POV vehicles	410	40	24	0.9871	0.002203	0.0005	0.428	

Notes:

FT - full time

WE - weekend

A value of "-40" miles was used because weekend travel by military vehicles will no longer occur under the proposed action.

ADDENDUM 2

Calculation of Emissions from Storage Tanks

Transfer Activity	Actual Qty of Fuel Transferred ⁽¹⁾ (1000 gal/yr)	Actual Annual Uncontrolled VOC Emission ⁽²⁾ (lb/yr)
Waste Oil # 1	0.6	0.0
Waste Oil # 2	0.6	0.0
<i>SUBTOTAL FOR WASTE OIL</i>		<i>0.0</i>
10,000 Gallon AST	7.5	1.59
<i>SUBTOTAL FOR DIESEL</i>		<i>1.59</i>
TOTAL EMISSIONS (lb/yr)		1.6
TOTAL EMISSIONS (tons/yr)		0.0008

Notes:

(1) Estimated

(2) Source: USEPA's TANKS program

Refer to attached TANKS program printouts for additional calculation details.

ADDENDUM 3

Annual Natural Gas Emissions

Natural Gas Boiler Emissions

Pollutant	sqft of building	Natural gas demand (scf/sqft-year)	Emission Factor (lbs/scf)	Ton Conversion (ton/lb)	Emissions (tons/year)
Combined Support Maintenance Shop					
VOC	109,000	28.1	0.0000055	0.0005	0.00842
NOx	109,000	28.1	0.00005	0.0005	0.07657
Unit Training Equipment Site					
VOC	84,000	43.2	0.0000055	0.0005	0.00998
NOx	84,000	43.2	0.00005	0.0005	0.09072
Regional Training Facility					
VOC	90,000	43.2	0.0000055	0.0005	0.01069
NOx	90,000	43.2	0.00005	0.0005	0.09720
Controlled Humidity Vehicle Storage Facility					
VOC	325,000	37.3	0.0000055	0.0005	0.03334
NOx	325,000	37.3	0.00005	0.0005	0.30306

Natural Gas Water Heater Emissions

Pollutant	Heat input (Btu/hour)	Annual Use (hours/year)	Conversion Factor (scf gas/Btu)	Emission Factor (lbs/scf)	Ton Conversion (ton/lb)	Emissions (tons/year)
Combined Support Maintenance Shop¹						
VOC	600,000	8760	0.00098	0.0000055	0.0005	0.01417
NOx	600,000	8760	0.00098	0.000094	0.0005	0.24219
Unit Training Equipment Site³						
VOC	600,000	8760	0.00098	0.0000055	0.0005	0.01417
NOx	600,000	8760	0.00098	0.000094	0.0005	0.24219
Regional Training Facility³						
VOC	600,000	8760	0.00098	0.0000055	0.0005	0.01417
NOx	600,000	8760	0.00098	0.000094	0.0005	0.24219

Total Annual Natural Gas Emissions

Pollutant	Emissions (tons/year)
VOC	0.10494
NOx	1.29412

Notes:

Heating input for hot water heaters is assumed to be 2000 Btu/hr-gallon.

¹ Based on one 150 gallon hot water heater and three 50-gallon hot water heaters.

² Based on one 150 gallon hot water heater and three 50-gallon hot water heaters.

³ Based on one 150 gallon hot water heater and three 50-gallon hot water heaters.

No hot water heaters will be installed at the Controlled Humidity Vehicle Storage Facility.

Construction Emissions

ADDENDUM 4

Clear and Rough Grade 140 Acres of Wooded Land/Scrub Vegetation (Includes widening 4,000 lf of tank trails)

Equipment	Qty	horsepower	Fuel Type	Usage	Usage Unit	Emission Factors					E.F. Unit	Load Factor	# of weeks	Emissions (tons)				
						VOC	NOx	CO	SOx	PM				VOC	NOx	CO	SOx	PM
Dozer	2	356	diesel	40	hr/wk	0.0020	0.0210	0.0100	0.0020	0.0005	lb/hp-hr	0.620	8.0	0.141	1.483	0.706	0.141	0.035
End Dump Truck	2	161	diesel	40	hr/wk	0.1900	4.1700	1.8000	0.4500	0.2600	lb/hr	NA	8.0	0.061	1.334	0.576	0.144	0.083
Wheeled Loader	2	350	diesel	40	hr/wk	0.2300	1.9000	0.5720	0.1820	0.1700	lb/hr	NA	8.0	0.074	0.608	0.183	0.058	0.054
Chainsaw	2	4	gasoline	40	hr/wk	0.6840	0.0021	2.1500	0.0008	0.0014	lb/hp-hr	1.000	8.0	0.876	0.003	2.752	0.001	0.002
Grader	1	156.6	diesel	40	hr/wk	0.0390	0.7130	0.1510	0.0860	0.0610	lb/hr	NA	8.0	0.006	0.114	0.024	0.014	0.010
Roller/Compactor	1	99	diesel	40	hr/wk	0.0650	0.8700	0.3000	0.0670	0.0500	lb/hr	NA	8.0	0.010	0.139	0.048	0.011	0.008
Water Truck	1	161	diesel	16	hr/wk	0.1900	4.1700	1.8000	0.4500	0.2600	lb/hr	NA	8.0	0.012	0.267	0.115	0.029	0.017
Plate Vibrator	1	8	diesel	40	hr/wk	0.0020	0.0200	0.0070	0.0020	0.0010	lb/hp-hr	0.430	8.0	1.10E-03	1.10E-02	3.85E-03	1.10E-03	5.50E-04

Finish Grading 140 Acres (Includes widening 4,000 lf of tank trails)

Equipment	Qty	horsepower	Fuel Type	Usage	Usage Unit	Emission Factors					E.F. Unit	Load Factor	# of weeks	Emissions (tons)				
						VOC	NOx	CO	SOx	PM				VOC	NOx	CO	SOx	PM
Grader	1	156.6	diesel	40	hr/wk	0.0390	0.7130	0.1510	0.0860	0.0610	lb/hr	NA	6.0	0.005	0.086	0.018	0.010	0.007
Wheeled Loader	1	350	diesel	40	hr/wk	0.2300	1.9000	0.5720	0.1820	0.1700	lb/hr	NA	6.0	0.028	0.228	0.069	0.022	0.020
Dozer	1	356	diesel	40	hr/wk	0.0020	0.0210	0.0100	0.0020	0.0005	lb/hp-hr	0.620	6.0	0.053	0.556	0.265	0.053	0.013
End Dump Truck	2	161	diesel	40	hr/wk	0.1900	4.1700	1.8000	0.4500	0.2600	lb/hr	NA	6.0	0.046	1.001	0.432	0.108	0.062
Plate Vibrator	1	8	diesel	20	hr/wk	0.0020	0.0200	0.0070	0.0020	0.0010	lb/hp-hr	0.430	6.0	4.13E-04	4.13E-03	1.44E-03	4.13E-04	2.06E-04
Roller/Compactor	1	99	diesel	20	hr/wk	0.0650	0.8700	0.3000	0.0670	0.0500	lb/hr	NA	6.0	0.004	0.052	0.018	0.004	0.003
Water Truck	1	161	diesel	5	hr/wk	0.1900	4.1700	1.8000	0.4500	0.2600	lb/hr	NA	6.0	0.003	0.063	0.027	0.007	0.004

Transport of Materials

Equipment	Qty	horsepower	Fuel Type	Usage	Usage Unit	Emission Factors					E.F. Unit	Load Factor	# of weeks	Emissions (tons)				
						VOC	NOx	CO	SOx	PM				VOC	NOx	CO	SOx	PM
Tractor Trailer	6	161	diesel	200	miles/wk	0.0106	0.0179	0.0377	0.0001	0.0016	lb/mile	NA	15.0	0.096	0.161	0.339	0.0007	0.015
5-ton Dump Trucks	6	240	diesel	40	hr/wk	0.1900	4.1700	1.8000	0.4500	0.2600	lb/hr	NA	15.0	0.342	7.506	3.240	0.810	0.468

Asphalt Paving, Concrete Paving, and Crushed Stone Roadways and Parking Areas

(Asphalt: 96,000 SF for South Boundary Road; Concrete: 168,500 SF bituminous concrete and 203,500 rigid concrete paving; Crushed Stone: 138,000 SF)

Equipment	Qty	horsepower	Fuel Type	Usage	Usage Unit	Emission Factors					E.F. Unit	Load Factor	# of weeks	Emissions (tons)				
						VOC	NOx	CO	SOx	PM				VOC	NOx	CO	SOx	PM
Compressor	1	37	diesel	40	hr/wk	0.0020	0.0180	0.0110	0.0020	0.0010	lb/hp-hr	0.480	15.0	0.011	0.096	0.059	0.011	0.005
Tractor	1	77	diesel	40	hr/wk	0.1800	1.2700	3.5800	0.0900	0.1400	lb/hr	0.465	15.0	0.054	0.381	1.074	0.027	0.042
Asphalt Paving	1	91	diesel	40	hr/wk	0.0020	0.0240	0.0100	0.0020	0.0010	lb/hp-hr	0.590	15.0	0.032	0.387	0.161	0.032	0.016
Roller/Compactor	3	99	diesel	40	hr/wk	0.0650	0.8700	0.3000	0.0670	0.0500	lb/hr	0.575	15.0	0.059	0.783	0.270	0.060	0.045
Cement Truck	2	200	diesel	10	hr/wk	0.0020	0.0240	0.0100	0.0020	0.0010	lb/hp-hr	0.560	2.0	0.004	0.054	0.022	0.004	0.002
5-ton Dump Trucks	6	240	diesel	40	hr/wk	0.1900	4.1700	1.8000	0.4500	0.2600	lb/hr	NA	15.0	0.342	7.506	3.240	0.810	0.468

ADDENDUM 4

Trenching and Covering

(3.5 miles of trenching that is 4 feet deep and 1 foot wide through sand that is adjacent to an asphalt road for a 6-inch natural gas pipe)

Equipment	Qty	horsepower	Fuel Type	Usage	Usage Unit	VOC	Emission Factors				E.F. Unit	Load Factor	# of weeks	Emissions (tons)				
							NOx	CO	SOx	PM				VOC	NOx	CO	SOx	PM
Tamper	1	37	diesel	40	hr/wk	0.0020	0.0180	0.0110	0.0020	0.0010	lb/hp-hr	0.480	15.0	0.011	0.096	0.059	0.011	0.005
Tamper	3	99	diesel	40	hr/wk	0.0650	0.8700	0.3000	0.0670	0.0500	lb/hr	0.575	15.0	0.059	0.783	0.270	0.060	0.045
Backhoe	1	77	diesel	60	hr/wk	0.0030	0.0220	0.0150	0.0020	0.0010	lb/hp-hr	0.465	15.0	0.048	0.354	0.242	0.032	0.016

Construction of Structures and Associated Items

(Combined Support Maintenance Shop, Unit Training Equipment Site, Regional Training Facility, Controlled Humidity Vehicle Storage Facility, Advanced Tank Bath Facility, utilities, lighting, fencing storm water basins, potable well, water treatment building, sidewalks, fire and security system, and landscaping)

Equipment	Qty	horsepower	Fuel Type	Usage	Usage Unit	VOC	Emission Factors (lb/hr)				E.F. Unit	Load Factor	# of weeks	Emissions (tons)				
							NOx	CO	SOx	PM				VOC	NOx	CO	SOx	PM
Cement Truck	2	200	diesel	10	hr/wk	0.0020	0.0240	0.0100	0.0020	0.0010	lb/hp-hr	0.560	2.0	0.004	0.054	0.022	0.004	0.002
Tractor Trailer	2	161	diesel	100	miles/wk	0.0106	0.0179	0.0377	0.0001	0.0016	lb/mile	NA	31.0	0.033	0.056	0.117	0.0003	0.005
Commercial Vans	4	N/A	gasoline	300	miles/wk	0.0023	0.0027	0.0317	0.00002	0.00005	lb/mile	NA	31.0	0.042	0.051	0.591	0.000	0.001
Compressor	2	10	diesel	40	hr/wk	0.0020	0.0180	0.0110	0.0020	0.0010	lb/hp-hr	0.480	31.0	0.012	0.107	0.065	0.012	0.006
Forklift	2	83	diesel	10	hr/wk	0.0030	0.0180	0.0220	0.0020	0.0015	lb/hp-hr	0.475	31.0	0.037	0.220	0.269	0.024	0.018
Generator	2	10	diesel	40	hr/wk	0.0025	0.0310	0.0067	0.0021	0.0022	lb/hp-hr	1.000	31.0	0.031	0.384	0.083	0.026	0.027
Hand Tamper	2	4	gasoline	20	hr/wk	0.0430	0.0040	0.8300	0.0005	0.00025	lb/hp-hr	0.550	2.0	3.78E-03	3.52E-04	7.30E-02	4.40E-05	2.20E-05

Estimated Total Construction Emissions (tons) **2.539** **24.928** **15.434** **2.529** **1.508**

ADDENDUM 5

Total Direct and Indirect Emissions for the Proposed Combined Logistics Training Facility

Alternative 3		
Annual Direct and Indirect Emissions	VOCs (tons/yr)	NOx (tons/yr)
Annual Military Vehicle and POV Emissions	4.37	3.49
Annual Storage Tank Emissions	0.001	n/a
Annual Natural Gas Emissions	0.10	1.29
TOTAL	4.48	4.78

Alternative 3		
One-time Direct Emissions	VOCs (tons/yr)	NOx (tons/yr)
Construction Equip. Emissions	2.54	24.93

Alternative 5 (No Action Alternative)

No additional direct or indirect emissions would result from the implementation of Alternative 2.